CITY OF NEWARK
CITY COUNCIL

City Administration Building, City Council Chambers

37101 Newark Boulevard, Newark, CA 94560 | (510) 578-4266 | E-mail: city.clerk@newark.org

AGENDA

Thursday, September 22, 2022
Revised on 9/19/2022
7:00 P.M.

HYBRID IN-PERSON/VIRTUAL MEETING
REFER TO THE END OF THE AGENDA TO REVIEW
OPTIONS FOR PARTICIPATING IN THE MEETING
REMOTELY OR IN-PERSON.

IF YOU ATTEND THE MEETING IN PERSON A FACE COVERING
IS RECOMMENDED BUT NOT REQUIRED.

A. ROLL CALL

B. PRESENTATIONS

1. Commending the U16 Boys National Premier League, National Champions in soccer

2. Introduction of employees

3. Presentation on Newark Library

C. PUBLIC COMMENT

The public is invited to address the City Council on any item not listed on the agenda. Public Comments are generally limited to 5 minutes per speaker. Please note that State law prohibits the Council from acting on non-agenda items.

D. CONSENT CALENDAR

Consent Calendar items are considered to be routine and may be approved by one motion. There will be no separate discussion on these items unless there is a request by a Council Member, a staff member, or a member of the public to remove an item for separate discussion and action.

1. Approval of Audited Demands

2. Approval of September 8, 2022 minutes

3. Adopt a resolution confirming the continued existence of a local emergency due to the COVID-19 Pandemic

4. Adopt a resolution finding that there is a proclaimed state of emergency; finding that meeting in person would present imminent risks to the health or safety of attendees as a result of the state of emergency; and authorizing continued remote teleconferenced meetings of the legislative bodies of the City of Newark for the 30 day period beginning September 22 pursuant to AB 361

5. Adopt a resolution amending the Conflict of Interest Code for nonelected officials and designated employees

6. Adopt a resolution approving Amendment No. 1 to the Contractual Services Agreement with GHD Inc. for additional traffic engineering and transportation planning services and amendment of the 2022-2024 Biennial Budget

7. Adopt a Resolution authorizing the acceptance of the Selective Traffic Enforcement Program (STEP) grant through the State of California Office of Traffic Safety (OTS) and amending the 2022-2024 Biennial Budget

E. PUBLIC HEARINGS

1. Public hearing to consider (1) adoption of a resolution approving the following: an Amendment to the General Plan, an Amendment to the Bayside Newark Specific Plan, a Vesting Tentative Map, a Design Review, a Minor Use Permit, a Density Bonus Incentive, an Addendum to EIR (SC#2010042012), a Transit Station Dedication Agreement, an Alternate Means of Compliance to Payment of Housing Impact Fees, and Grand Park Agreement Amendment; and (2) introduction of an ordinance amending the Zoning Map; for approval of the FMC Willow and Grand Park project consisting of 279 residential units, 3,600 square feet of retail, 91 affordable housing units, and a 1,485 square foot community building [APN's 537-0852-001-02 (portion), 537-0852-001-07 (portion), 537-0852-002-08 & 092-0100-005].

F. OTHER BUSINESS

1. Adopt two resolutions approving (1) a Standard Agreement, Loan Agreement, Regulatory Agreement, Promissory Note and Deed of Trust, and (2) a Subordination Agreement for the Towne Place Suite Homekey Project known as "Cedar Community Apartments" at 39802 Cedar Boulevard

G. CITY COUNCIL MATTERS

City Council Members report on attendance at intergovernmental agency meetings, conferences, and seminars since the last meeting. City Council Members may also announce upcoming events and coordinate attendance; report on local events attended since the last meeting; and make brief comments on issues of concern.

1. Adopt a resolution approving the Mayor's appointment to the Planning Commission

H. CLOSED SESSION

I. ADJOURNMENT

HYBRID IN-PERSON/VIRTUAL MEETING NOTICE

This meeting is being conducted utilizing teleconferencing and electronic means consistent with Assembly Bill 361 (2021). Members of the public may attend the meeting in person, virtually via Zoom, or watch it via YouTube. If you attend the meeting in person, a face covering is recommended but not required.

Mayor Nagy, Vice Mayor Hannon, and Council Members Bucci, Collazo, and Freitas may be attending this meeting via teleconference. Teleconference locations are not open to the public. In the event that any members of the City Council elect to attend this meeting via teleconference, all votes conducted during the teleconferencing session will be conducted by roll call vote.

How to view the meeting remotely:
Livestream online at YouTube: https://www.youtube.com/channel/UC383NGSxaPwZP1lkJbo2T8A
Copy/paste the YouTube URL into your browser if the link does not automatically open.

How to participate in the meeting remotely, via Zoom Webinar:
From a PC, Mac, iPad, iPhone or Android device: Zoom Meeting https://us06web.zoom.us/j/85134561209

From a telephone dial 1- 669-900-9128, Webinar ID Number 851 3456 1209

Provide live, remote public comments, when the Mayor calls for comments. Use the raise your hand feature in Zoom to be called upon by the City Clerk.

For frequently asked Zoom questions, please go to Agendas and Minutes and select the Frequently Asked Questions link.

No question shall be asked of a council member, city staff, or an audience member except through the Mayor. No person shall use vulgar, profane, loud or boisterous language that interrupts a meeting. Any person who refuses to carry out instructions given by the Mayor for the purpose of maintaining order may be guilty of an infraction and may result in removal from the meeting.

Council Meeting Access/Materials:
The agenda packet is available for review at Agendas and Minutes. The packet is typically posted to the City website the Friday before the meeting, but no later than 72 hours before the meeting.

Pursuant to Government Code 54957.5, supplemental materials distributed less than 72 hours before this meeting, to a majority of the City Council, will be made available for public inspection at this meeting and will be posted, if time allows, at Agendas and Minutes. Materials prepared by City staff and distributed during the meeting are available for public inspection at the meeting or after the meeting if prepared by some other person. Documents related to closed session items or are exempt from disclosure will not be made available for public inspection. For those persons who require special accommodations, please contact the City Clerk at least two days prior to the meeting at City Clerk or 510-578-4266.

STAFF REPORT

Item B. 1.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Sheila Harrington, City Clerk
SUBJECT	Commending the U16 Boys National Premier League, National Champions in soccer

The 1974 Newark Soccer team won the U16 Boys National Premier League, National Championship. Head Coach Ryan Medrano and members of the soccer team, will receive a commendation at the City Council meeting in honor of their achievement.

Attachments

Commendation

COMMENDATION

1974 NEWARK FC 06 BOYS
2022 U16 BOYS NATIONAL PREMIER LEAGUE
NATIONAL CHAMPIONS

WHEREAS, the **1974 NEWARK FC 06** boys soccer team won the U16 BOYS, NATIONAL PREMIER LEAGUE, NATIONAL CHAMPIONSHIP on Monday, July 11, 2022, in Denver, Colorado; and

WHEREAS, this is the first ever NPL National Championship for 1974 Newark FC in their 48 year history; and

WHEREAS, the **1974 NEWARK FC 06** boys were the Nor Cal Premier fall NPL 1 Champions, spring Nor Cal NPL Champions League Champions and the NPL West Playoff Champions with a record of 20-0-2; and

WHEREAS, the **1974 NEWARK FC 06** boys Staff, Ryan Medrano, Javier Bedolla and Rich Romo, have worked together to support, train, encourage, and develop not only technically sound and creative soccer players, but respectful young men who will contribute to society in a positive way; and

WHEREAS, the members of the **1974 NEWARK FC 06 BOYS SOCCER TEAM** are:

Luke Bell	**Jose Gomez**	**Julio Martinez-Galvan**	**Gabriel Rico**
Noel Cabrales	**Braden Herline**	**Nathaniel Medrano**	**Armando Rodriguez**
Mateo Castellanos	**Jesus Lua Amaya**	**Jeremy Miller**	**Edwin Rodriguez**
Brennan Dew	**Elmer Martinez**	**Sean Rante**	**Izeyah Romo**
Oliver Gill			

NOW THEREFORE, I, Alan L Nagy, Mayor of the City of Newark, on behalf of the Newark City Council, do hereby commend the

1974 NEWARK FC 06 BOYS
2022 U16 BOYS NATIONAL PREMIER LEAGUE
NATIONAL CHAMPIONS

for their exciting and outstanding achievement.

IN WITNESS THEREOF, I have hereunto set forth my hand and caused the Official Seal of the City of Newark, State of California, to be affixed this Twenty-Second day of September, Two Thousand Twenty-Two.

Alan L. Nagy
Mayor

STAFF REPORT

Item B. 2.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Sheila Harrington, City Clerk
SUBJECT	Introduction of employees

The following employees will be introduced at the City Council meeting:

Gustavo Perez, Building Mechanic II
Mark Valdez, Building Mechanic I
Roberto Garcia-Acosta, Accountant

STAFF REPORT

Item B. 3.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Sheila Harrington, City Clerk
SUBJECT	Presentation on Newark Library

Branch Manager Joe Stoner will provide the annual report at the City Council meeting covering statistics and special programs at the Newark Library. A copy of the presentation is attached.

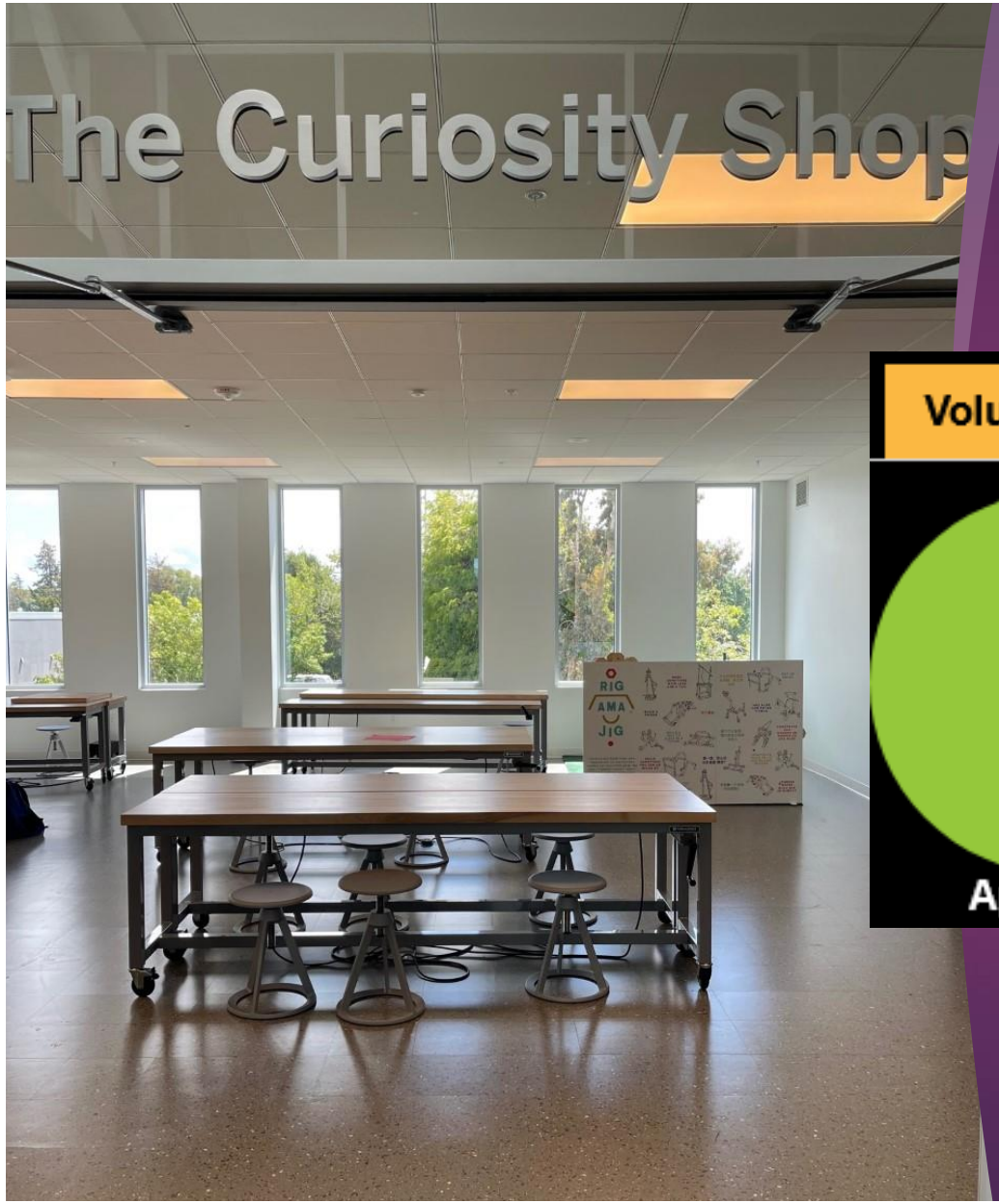
Attachments

Presentation

"Libraries Transform Lives"

Newark Library

ANNUAL REPORT



Volunteers | Administrators

Applicant	In Process	Accepted	Inactive	Archived
0	0	401	9	125


A's
A's
ROB



Learning Lab

Adult education:

- English classes
- English Conversation Groups
- Beginning Computers in Spanish
- Entrepreneurship
- US Citizenship Exam classes
- Ohlone College partnership

NEWARK JUNIOR HIGH

Student Population

Explore information about this school's student population.

LEARN MORE

Enrollment

774

View More Information →

LEARN MORE

Socioeconomically Disadvantaged

69%

LEARN MORE

English Learners

20%



Pre-COVID & Pre-construction Checkouts		
Compared to opening new building		
November	18,527	21,989
December	18,578	22,509
January	21,842	21,330
February	19,961	21,416
March	22,101	25,953
April	20,205	24,557
May	19,444	21,628
June	22,292	28,113
July	22,213	24,617
August	20,725	24,891
	205,888	237,003

Newark	Gate Count	Days Open	Hours Open	Daily Avg.	Hourly Avg.
July	0	0	0	0	0
August	812	7	28	116	29
September	2,394	21	84	114	29
October	4,599	21	122	219	38
November	6,745	20	155	337	44
December	6,757	21	165	322	41
January	6,162	20	156	308	40
February	7,488	19	148	394	51
March	9,138	23	180	397	51
April	8,961	21	163	427	55
May	9,380	21	164	447	57
June	11,006	22	172	500	64
Fiscal Year to Date	73,442	216	1,537	326	45



229 Onsite Programs

7,797 Attendance

	Number of Programs	Attendance
Albany	4	85
Castro Valley	26	1,154
Centerville	25	858
Dublin	1	11
Fremont	27	1,274
Newark	99	3,482
REACH	20	327
San Lorenzo	23	482
Union City	4	124



Homework Help – 9-10 tutors per day providing 663 sessions.


Newark Library
Promotores de Salud y Educación Comunitaria
Reading Club
Club de Lectura
Little Hands in Action
Manitas en Acción




Building Resilience &
Bringing in Black Joy:
Using mindfulness and creativity to
improve mental health
Featuring Arianna Wheat, LMFT
April 14th 7-8pm



TherActivist

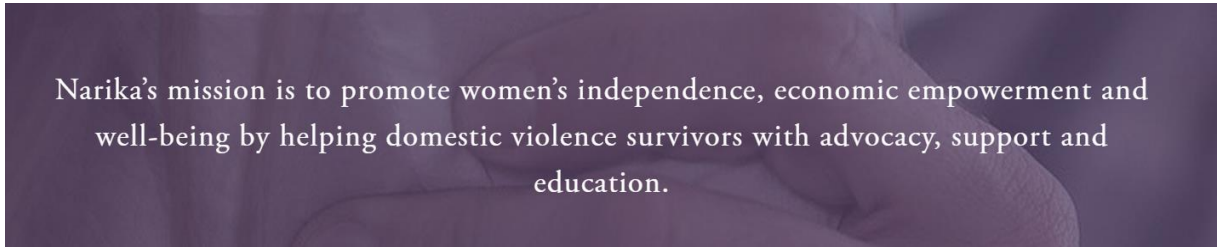
Film Screening and Q&A with Dana TherActivist Johnson, MSW and Khalid Akil White, Ed.D.

AC Library's Black Health & Wellness series celebrates LGBTQIA+ Pride month with a film about Dana TherActivist Johnson. They are a Black transmasculine and nonbinary social worker and community leader who uses intersectional "therapeutic activism" or TherActivism to create positive change.

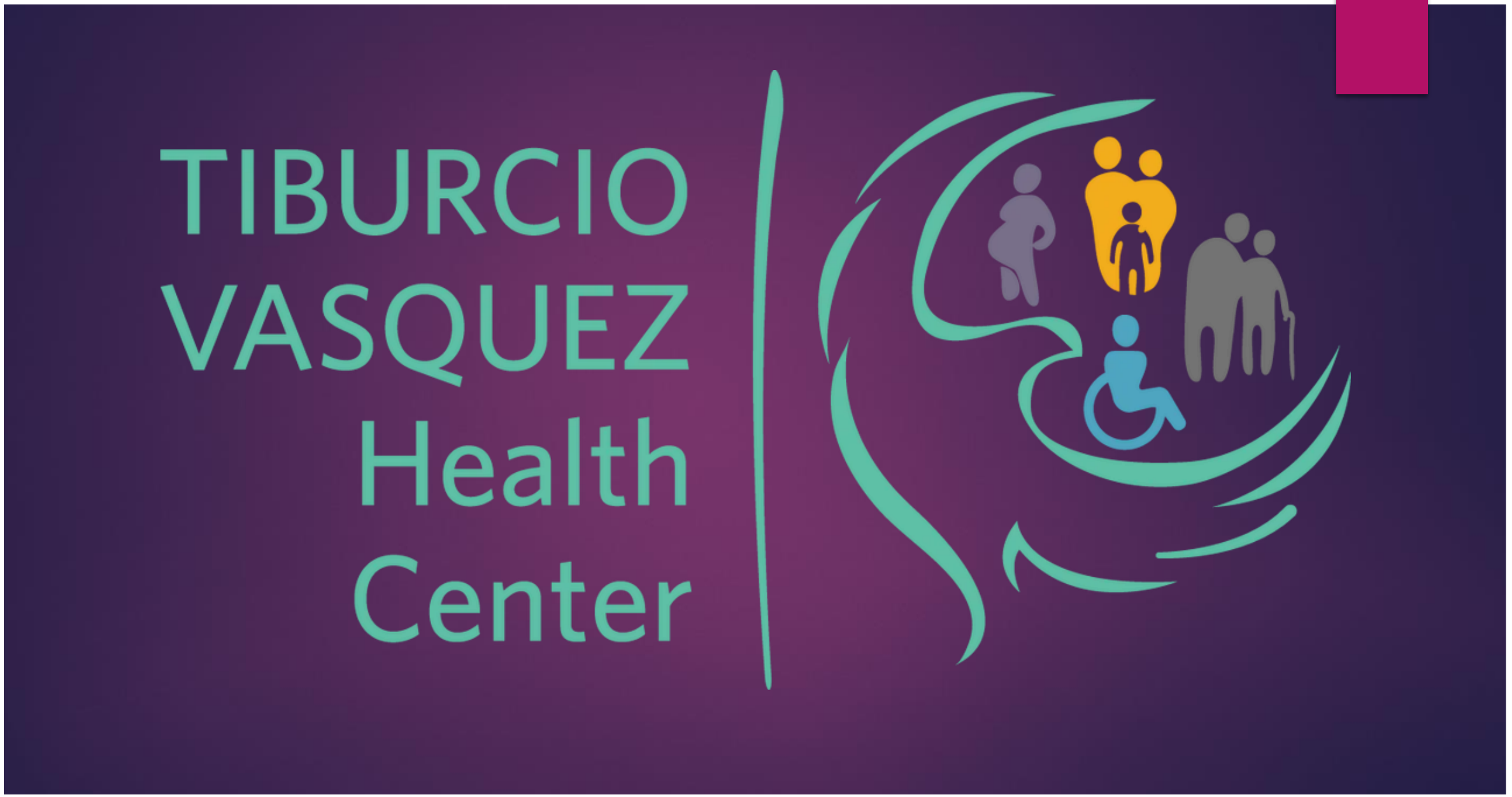
Join us for this virtual program on June 28th 7-8:30 p.m.

NARIKA

CHANGING THE WAY WE LIVE- VIOLENCE FREE




Get Better. Do Better. Be Better.
Search
health RIGHT 360
Services
Programs
Locations
About
Get Involved
Donate
Asian American Recovery Services
Asian American Recovery Services (AARS) provides an array of culturally competent services to the Asian and Pacific Islander and other ethnically diverse communities of the San Francisco Bay Area.
ASIAN AMERICAN RECOVERY SERVICES
A PROGRAM OF HEALTHRIGHT 360


TIBURCIO
VASQUEZ
Health
Center

CALIFORNIA STATE LIBRARY

Home | Grant and Funding Opportunities | Stronger Together: Out of School Time

Stronger Together: Out of School Time

- Social-emotional development
- Workplace preparedness of teens
- Youth voice and leadership
- Academic / technological advancement of youths






STUDIO 49

The End

STAFF REPORT

Item D. 1.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Krysten Lee, Finance Director
SUBJECT	Approval of Audited Demands

Attachments

Audited Demands

LIVE Newark CA LIVE

Payment Batch Register

Bank Account: AP - ZBA ACCOUNTS PAYABLE

Batch Date: 09/08/2022

Type	Date	Number Source	Payee Name	EFT Bank/Account	Transaction Amount
Bank Account: AP - ZBA ACCOUNTS PAYABLE					
Check	09/08/2022	6585 Accounts Payable	ALAMEDA COUNTY SHERIFF'S OFFICE		851.57
	Invoice	Date	Description		Amount
	PPE 9.3.22	09/08/2022	GARNISH - WAGE GARNISHMENT CASE# 21CV000937		851.57
Check	09/08/2022	6586 Accounts Payable	ALPINE AWARDS INC		376.20
	Invoice	Date	Description		Amount
	5552038	08/15/2022	VOLLEYBALL LEAGUE CHAMPIONS SHIRTS		206.04
	5552039	08/15/2022	BASKETBALL JUST WON IT CINCH PACKS		170.16
Check	09/08/2022	6587 Accounts Payable	MATTHEW AVILA		232.13
	Invoice	Date	Description		Amount
	0801-080522EXP	08/23/2022	EXPENSE REIMBURSEMENT FOR BOLA - MATT AVILA		232.13
Check	09/08/2022	6588 Accounts Payable	BATTERY SYSTEMS		102.23
	Invoice	Date	Description		Amount
	7854708	08/15/2022	BATTERIES		102.23
Check	09/08/2022	6589 Accounts Payable	BAVCO		1,645.75
	Invoice	Date	Description		Amount
	173335	08/18/2022	IRRIGATION SUPPLIES		1,645.75
Check	09/08/2022	6590 Accounts Payable	BUREAU VERITAS NORTH AMERICA INC.		2,259.56
	Invoice	Date	Description		Amount
	RI 22049186	08/16/2022	BI FIELD INSPECTION AND RELATED PROFESSIONAL SERVICES		2,259.56
Check	09/08/2022	6591 Accounts Payable	CA POLICE CHIEFS ASSOC		450.00
	Invoice	Date	Description		Amount
	0912-091422CERVA	09/07/2022	WLLE 2022 REGISTRATION		450.00
Check	09/08/2022	6592 Accounts Payable	CENTRAL TOWING & TRANSPORT LLC		315.85
	Invoice	Date	Description		Amount
	0705-072822	07/31/2022	TOWING SERVICES 0705-072822		315.85
Check	09/08/2022	6593 Accounts Payable	JADA CHIU		614.68
	Invoice	Date	Description		Amount
	0816-081722EXP	09/07/2022	EXPENSE REIMBURSEMENT		614.68
Check	09/08/2022	6594 Accounts Payable	CITY OF FREMONT		93,827.32

	Invoice	Date	Description	Amount
	325122	08/18/2022	JANUARY 2022 - JUNE 2022 PARATRANSIT SERVICE	93,827.32
Check	09/08/2022	6595 Accounts Payable	CIVICPLUS, LLC	1,292.66
	Invoice	Date	Description	Amount
	236587	08/05/2022	MUNICODES ADDITIONAL COPIES & REPRINTS	1,292.66
Check	09/08/2022	6596 Accounts Payable	BRYAN COBB	88.26
	Invoice	Date	Description	Amount
	0805-08122022EXP	09/06/2022	EXPENSE AND MILEAGE REIMBURSEMENT	88.26
Check	09/08/2022	6597 Accounts Payable	CRIME SCENE CLEANERS INC	208.00
	Invoice	Date	Description	Amount
	85287	08/30/2022	HAZARDOUS WASTE CLEAN UP 08/30/22	208.00
Check	09/08/2022	6598 Accounts Payable	DAILY JOURNAL CORPORATION	100.00
	Invoice	Date	Description	Amount
	B3616875	08/30/2022	LEGAL ADVERTISING	100.00
Check	09/08/2022	6599 Accounts Payable	EDEN I&R INC	17,266.15
	Invoice	Date	Description	Amount
	23-003	07/27/2022	2-1-1 PHONE LINE SERVICE 07/01/22-06/30/23	17,266.15
Check	09/08/2022	6600 Accounts Payable	FASTENAL COMPANY	233.24
	Invoice	Date	Description	Amount
	CAS1130532	07/11/2022	ADAPTER	233.24
Check	09/08/2022	6601 Accounts Payable	FIRESTONE PHOTOGRAPHY	947.43
	Invoice	Date	Description	Amount
	472	07/15/2022	DEPARTMENT PHOTOS	947.43
Check	09/08/2022	6602 Accounts Payable	FREMONT ALARM	732.06
	Invoice	Date	Description	Amount
	41277	08/26/2022	FIRE ALARM CONTROL BOARD INSTALL AND TEST	732.06
Check	09/08/2022	6603 Accounts Payable	YAMA HOMAYOUN	512.70
	Invoice	Date	Description	Amount
	0808-081022EXP	09/07/2022	EXPENSE REIMBURSEMENT	512.70
Check	09/08/2022	6604 Accounts Payable	JOSH HORST	505.13
	Invoice	Date	Description	Amount
	0816-081722EXP	09/07/2022	EXPENSE REIMBURSEMENT	505.13
Check	09/08/2022	6605 Accounts Payable	JOSEPH HUNTER	868.32
	Invoice	Date	Description	Amount
	0728-072922EXP	09/07/2022	EXPENSE REIMBURSEMENT	868.32
Check	09/08/2022	6606 Accounts Payable	INDUSTRIAL PLUMBING SUPPLY, LLC.	267.70
	Invoice	Date	Description	Amount
	102546	08/16/2022	IRRIGATION SUPPLIES-WASTE STRAINER	267.70
Check	09/08/2022	6607 Accounts Payable	CARMELISA LOPEZ	196.20
	Invoice	Date	Description	Amount

	090122EXP	09/01/2022	APA CONFERENCE SANTA ANA/TRAVEL EXPENSES	196.20
Check	09/08/2022	6608 Accounts Payable	MEYERS NAVE, A PROFESSIONAL CORPORATION	26,510.86
	Invoice	Date	Description	Amount
	196843	08/17/2022	LEGAL SERVICES THROUGH JULY 31, 2022	350.12
	196848	08/17/2022	LEGAL SERVICES THROUGH JULY 31, 2022	142.50
	196849	08/17/2022	LEGAL SERVICES THROUGH JULY 31, 2022	7,856.40
	196850	08/17/2022	LEGAL SERVICES THROUGH JULY 31, 2022	705.00
	196851	08/17/2022	LEGAL SERVICES THROUGH JULY 31, 2022	1,408.84
	196852	08/17/2022	LEGAL SERVICES THROUGH JULY 31, 2022	7,554.50
	196855	08/17/2022	LEGAL SERVICES THROUGH JULY 31, 2022	5,455.50
	196856	08/17/2022	LEGAL SERVICES THROUGH JULY 31, 2022	620.00
	196857	08/17/2022	LEGAL SERVICES THROUGH JULY 31, 2022	2,418.00
Check	09/08/2022	6609 Accounts Payable	NETWORK CONTRACTING LLC	390.00
	Invoice	Date	Description	Amount
	3905	08/19/2022	NETWORK CONSULTING SERVICES 08/19/22	390.00
Check	09/08/2022	6610 Accounts Payable	OSBORNE LUMBER COMPANY, INC.	201.77
	Invoice	Date	Description	Amount
	562417	08/17/2022	LUMBER-BLG MAINT	201.77
Check	09/08/2022	6611 Accounts Payable	OWEN EQUIPMENT COMPANY	2,892.59
	Invoice	Date	Description	Amount
	00057318	08/16/2022	SWEEPER PARTS	2,892.59
Check	09/08/2022	6612 Accounts Payable	PHOENIX GROUP INFORMATION SYSTEMS	563.80
	Invoice	Date	Description	Amount
	072022101	08/16/2022	PARKING CITATION PROGRAM JULY 2022	563.80
Check	09/08/2022	6613 Accounts Payable	ANTHONY PIQUETTE	402.35
	Invoice	Date	Description	Amount
	0728-072922EXP	09/07/2022	EXPENSE REIMBURSEMENT	402.35
Check	09/08/2022	6614 Accounts Payable	PUBLIC SAFETY FAMILY COUNSELING GROUP, INC.	13,000.00
	Invoice	Date	Description	Amount
	P2207-105	08/17/2022	PSYCHOLOGICAL SERVICES ANNUAL CONTRACT FY 22/23	13,000.00
Check	09/08/2022	6615 Accounts Payable	RELIABLE TRANSLATIONS INC.	2,160.00
	Invoice	Date	Description	Amount
	22654	08/29/2022	TRANSLATION SVCS. 8/29/22 - MANDARIN, VIETNAMESE & SPANISH	2,160.00
Check	09/08/2022	6616 Accounts Payable	SIMON & COMPANY INC	1,720.00
	Invoice	Date	Description	Amount
	07-2022	07/28/2022	PROFESSIONAL FEDERAL AFFAIRS ASSISTANCE 07/22	1,720.00
Check	09/08/2022	6617 Accounts Payable	STATE OF CALIFORNIA	888.32
	Invoice	Date	Description	Amount
	PPE 09.03.2022	09/08/2022	GARNISH - WAGE GARNISHMENT CASE# 569116649	888.32

Check	09/08/2022	6618 Accounts Payable	T-MOBILE	139.04
	Invoice	Date	Description	Amount
	966241989-082122	08/21/2022	IPHONE SVC 07/21-08/20/22	139.04
Check	09/08/2022	6619 Accounts Payable	HINDERLITER DE LLAMAS & ASSOCIATES	4,850.84
	Invoice	Date	Description	Amount
	SIN020376	08/18/2022	SALES TAX AUDIT SERVICES Q1/2022	4,850.84
Check	09/08/2022	6620 Accounts Payable	VERIZON WIRELESS	3,064.86
	Invoice	Date	Description	Amount
	9913011243	08/09/2022	CELL SVC FOR MDC'S 06/10-08/09/22	3,064.86
Check	09/08/2022	6621 Accounts Payable	JOYCE WANG	1,268.70
	Invoice	Date	Description	Amount
	0928-093022ADV	09/07/2022	SOSO BOOTCAMP ADV; 09/28-09/30/22	728.28
	0816-081722EXP	09/07/2022	EXPENSE REIMBURSEMENT	540.42
Check	09/08/2022	6622 Accounts Payable	MATTHEW WARREN	3,325.58
	Invoice	Date	Description	Amount
	0718-072922EXP	09/07/2022	EXPENSE REIMBURSEMENT	3,325.58
Check	09/08/2022	6623 Accounts Payable	ORION SECURITY	5,379.05
	Invoice	Date	Description	Amount
	117955	07/30/2022	UNARMED, UNIFORMED SECURITY OFFICER 7/25/22-7/29/22	1,444.00
	117939	07/31/2022	UNARMED, UNIFORMED SECURITY OFFICER 7/18/22-7/31/22	180.65
	118045	08/06/2022	UNARMED, UNIFORMED SECURITY OFFICER 08/01/22-08/04/22	1,155.20
	118091	08/13/2022	UNARMED, UNIFORMED SECURITY OFFICER 08/08/22-08/12/22	1,444.00
	118144	08/20/2022	UNARMED, UNIFORMED SECURITY OFFICER 08/15/22-08/18/22	1,155.20
Check	09/08/2022	6624 Accounts Payable	ONG , SELINA	238.00
	Invoice	Date	Description	Amount
	657835	09/06/2022	STUDENT INJURED COLLARBONE JT	238.00

AP ZBA ACCOUNTS PAYABLE Totals: Transactions: 40 $190,888.90

Checks: 40 $190,888.90

LIVE Newark CA LIVE

Payment Batch Register

Bank Account: AP - ZBA ACCOUNTS PAYABLE

Batch Date: 09/01/2022

Type	Date	Number Source	Payee Name	EFT Bank/Account	Transaction Amount
Bank Account: AP - ZBA ACCOUNTS PAYABLE					
Check	09/01/2022	6497 Accounts Payable	4LEAF INC		44,729.00
	Invoice	Date	Description		Amount
	J3962J	06/30/2022	TEMPORARY PROFESSIONAL PLANNING SERVICES/6/1/22-6/30/22		15,225.00
	J1118A50	08/15/2022	BI FIELD INSPECTION AND RELATED PROFESSIONAL SERVICES 07/22		13,984.00
	J1118A49	07/22/2022	BI FIELD INSCPECTION AND RELATED PROFESSIONAL SERVICES 06/22		15,520.00
Check	09/01/2022	6498 Accounts Payable	ABACUS PRODUCTS INC		1,356.04
	Invoice	Date	Description		Amount
	B68995	08/11/2022	CITY ENVELOPES		624.01
	B68844	07/26/2022	PRINTING SVCS - ADMINISTRATIVE CITATION		732.03
Check	09/01/2022	6499 Accounts Payable	ACCESS		160.00
	Invoice	Date	Description		Amount
	9584752	07/31/2022	SHREDDING SVCS JULY 2022		80.00
	9526195-1	06/30/2022	SHREDDING SVCS JUNE 2022		80.00
Check	09/01/2022	6500 Accounts Payable	AFLAC		920.48
	Invoice	Date	Description		Amount
	AUGUST PREMIUMS	08/25/2022	AFLAC STD - AFLAC SHORT TERM DISABILITY*		920.48
Check	09/01/2022	6501 Accounts Payable	AIR EXCHANGE INC		2,219.47
	Invoice	Date	Description		Amount
	91607281	06/07/2022	PLYMOVENT SERVICE AND MAINTENANCE		1,067.79
	91607282	06/07/2022	PLYMOVENT SERVICE AND MAINTENANCE		150.00
	91607269	05/31/2022	PLYMOVENT SERVICE AND MAINTENANCE		1,001.68
Check	09/01/2022	6502 Accounts Payable	TREASURER OF ALAMEDA COUNTY		5,826.25
	Invoice	Date	Description		Amount
	JULY'22	08/01/2022	CRIME LAB FEES - JULY'22		5,826.25
Check	09/01/2022	6503 Accounts Payable	ALAMEDA COUNTY WATER DISTRICT		53,462.10
	Invoice	Date	Description		Amount
	0426-070622	07/13/2022	ACWD CITYWIDE WATER SERVICE		53,462.10
Check	09/01/2022	6504 Accounts Payable	ALLIED AUTO STORES INC		1,549.03
	Invoice	Date	Description		Amount
	MAR' 22	03/31/2022	ALLIED FLEET PARTS AND SUPPLIES		1,353.18
	JUN' 22	06/30/2022	ALLIED FLEET PARTS AND SUPPLIES		195.85

Check	09/01/2022	6505 Accounts Payable	ATI RESTORATION, LLC	3,438.25
	Invoice	Date	Description	Amount
	EH28327124-001	07/07/2022	EMERGENCY MITIGATION SERVICES AT SECOND CHANCE	3,438.25
Check	09/01/2022	6506 Accounts Payable	ARCHIVESOCIAL	2,988.00
	Invoice	Date	Description	Amount
	22252	07/01/2022	SOCIAL MEDIA ARCHIVING SUBSCRIPTION	2,988.00
Check	09/01/2022	6507 Accounts Payable	BAY AREA TEMPORARY SANITATION, INC.	44.28
	Invoice	Date	Description	Amount
	96421	08/25/2022	UNIT REPAIR	44.28
Check	09/01/2022	6508 Accounts Payable	BAY CENTRAL PRINTING	1,134.12
	Invoice	Date	Description	Amount
	191702	04/20/2022	BUSINESS CARDS	64.27
	191975	05/12/2022	PARKING & DEPARMENT SIGNS FOR GRAND OPENING	1,069.85
Check	09/01/2022	6509 Accounts Payable	K BROOKS STRATEGIES	12,000.00
	Invoice	Date	Description	Amount
	8.4.22	08/04/2022	CONSULTANT SERVICES FOR CHAMBER OF COMMERCE/SVC DATE 6/30/22	12,000.00
Check	09/01/2022	6510 Accounts Payable	BUREAU VERITAS NORTH AMERICA INC.	35,150.41
	Invoice	Date	Description	Amount
	RI 22042720	06/28/2022	BI FIELD INSPECTION AND RELATED PROFESSIONAL SERVICES	35,150.41
Check	09/01/2022	6511 Accounts Payable	BURTON'S FIRE INC	47.82
	Invoice	Date	Description	Amount
	S 57115	08/08/2022	FIRE TRUCK PARTS - RADIATOR CAP	47.82
Check	09/01/2022	6512 Accounts Payable	CA POLICE CHIEFS ASSOC	450.00
	Invoice	Date	Description	Amount
	0912-091422WANG	08/24/2022	WLLE 2022 REGISTRATION	450.00
Check	09/01/2022	6513 Accounts Payable	CAL SAFETY INC	6,000.00
	Invoice	Date	Description	Amount
	29120	07/26/2022	TRAFFIC CONTROL - MUSIC AT THE GROVE	6,000.00
Check	09/01/2022	6514 Accounts Payable	CAL-WEST LIGHTING & SIGNAL MAINTENANCE	9,380.94
	Invoice	Date	Description	Amount
	220840	08/12/2022	STREETLIGHT KNOCKDOWN POLE #4603	4,690.47
	220841	08/12/2022	STREETLIGHT KNOCKDOWN, POLE # 3502	4,690.47
Check	09/01/2022	6515 Accounts Payable	CENTRAL TOWING & TRANSPORT LLC	1,995.45
	Invoice	Date	Description	Amount
	0502-062322	07/31/2022	TOWING SERVICE 0502-062322	709.60
	0203-062322	07/31/2022	TOWING FY 21/22	1,103.85
	0705-071822	07/31/2022	TOWING FY 22/23	182.00
Check	09/01/2022	6516 Accounts Payable	CENTRAL VALLEY TOXICOLOGY, INC.	842.00
	Invoice	Date	Description	Amount

	321303	07/01/2022	LAB TESTS 07/01/22	189.00
	321478	07/08/2022	LAB TESTS 07/08/22	38.00
	321610	07/15/2022	LAB TESTS 07/15/22	235.00
	321611	07/15/2022	LAB TESTS 07/15/22	260.00
	321612	07/15/2022	LAB TESTS 07/15/22	40.00
	321800	07/22/2022	LAB TESTS 07/22/22	40.00
	321865	07/28/2022	LAB TESTS 07/28/22	40.00
Check	09/01/2022	6517 Accounts Payable	APRO LLC	170.00
	Invoice	Date	Description	Amount
	070122-073122	07/31/2022	PATROL VEHICLE CLEANING JULY 2022	170.00
Check	09/01/2022	6518 Accounts Payable	CHILDCARE CAREERS, LLC	686.05
	Invoice	Date	Description	Amount
	547532	08/19/2022	PAYMENT FOR CHILDCARE SUBSTITUTE AIDE SERVICES	686.05
Check	09/01/2022	6519 Accounts Payable	CINDY K. HULL & ASSOCIATES - FORENSIC CONSULTING	1,300.00
	Invoice	Date	Description	Amount
	132	07/11/2022	LATENT PRINT ANALYSIS JULY 2022	1,080.00
	133	08/29/2022	LATENT PRINT ANALYSIS AUGUST 2022	220.00
Check	09/01/2022	6520 Accounts Payable	CITY OF FREMONT	4,185.66
	Invoice	Date	Description	Amount
	#43	08/29/2022	SACGISA PROGRAM MAINTENANCE (4/1/22-6/30/22)	4,185.66
Check	09/01/2022	6521 Accounts Payable	CONNECTWISE	1,782.24
	Invoice	Date	Description	Amount
	INV00648731	07/31/2022	IT MANAGEMENT SOFTWARE 08/20-09/19/22	890.88
	INV00627249	07/21/2022	IT MANAGEMENT SOFTWARE 07/20-08/19/22	891.36
Check	09/01/2022	6522 Accounts Payable	COTTON, SHIRES AND ASSOCIATES, INC.	1,998.75
	Invoice	Date	Description	Amount
	522213	05/26/2022	PEER REVIEW SERVICES (5/1/22-5/22/22)	1,998.75
Check	09/01/2022	6523 Accounts Payable	ALAMEDA COUNTY PUBLIC HEALTH LAB	126.00
	Invoice	Date	Description	Amount
	6220013	06/30/2022	ANIMAL RABIES EXAM	126.00
Check	09/01/2022	6524 Accounts Payable	COUNTY OF ALAMEDA AUDITOR-CONTROLLER	7,005.00
	Invoice	Date	Description	Amount
	FY22029	05/18/2022	MEMBERSHIP FEE FOR FY 2022-2023	7,005.00
Check	09/01/2022	6525 Accounts Payable	CRIME SCENE CLEANERS INC	78.00
	Invoice	Date	Description	Amount
	85167	08/06/2022	HAZARDOUS WASTE CLEAN UP 08/06/22	78.00
Check	09/01/2022	6526 Accounts Payable	DAILY JOURNAL CORPORATION	140.00
	Invoice	Date	Description	Amount
	B3617126	08/24/2022	PH NOTICES 22-23 CITY COUNCIL MEETING FMC WILLOW	140.00
Check	09/01/2022	6527 Accounts Payable	DALE HARDWARE	978.38

	Invoice	Date	Description	Amount
	AUG' 22	08/25/2022	DH- PARTS AND SUPPLIES	978.38
Check	09/01/2022	6528 Accounts Payable	DELL MARKETING L.P.	120,222.75
	Invoice	Date	Description	Amount
	10599682614	07/15/2022	MICROSOFT EA LICENSES ANNUAL YEAR 1 OF 3	120,222.75
Check	09/01/2022	6529 Accounts Payable	DELTA DENTAL OF CALIFORNIA	18,889.87
	Invoice	Date	Description	Amount
	BE005116318	08/25/2022	DELTA DENTAL PPO - SEPTEMBER PREMIUMS	18,889.87
Check	09/01/2022	6530 Accounts Payable	DELTA DENTAL INSURANCE COMPANY	113.73
	Invoice	Date	Description	Amount
	BE005114462	08/25/2022	DELTA CARE - SEPTEMBER PREMIUMS	113.73
Check	09/01/2022	6531 Accounts Payable	DEPARTMENT OF JUSTICE	706.00
	Invoice	Date	Description	Amount
	596121	08/04/2022	FINGERPRINTING FEES	706.00
Check	09/01/2022	6532 Accounts Payable	DESTINY SOFTWARE, INC.	6,500.00
	Invoice	Date	Description	Amount
	4793	08/01/2022	AGENDAQUICK SOFTWARE 09/22-08/23	6,500.00
Check	09/01/2022	6533 Accounts Payable	EJM DIGITAL LLC	399.00
	Invoice	Date	Description	Amount
	0928-093022	08/24/2022	POST TRAINING	399.00
Check	09/01/2022	6534 Accounts Payable	ENVIRONMENTAL LOGISTICS	27,807.00
	Invoice	Date	Description	Amount
	111209	09/30/2021	HAZARDOUS WASTE DISPOSAL 09/30/21	16,882.00
	113017	03/11/2022	HAZARDOUS WASTE DISPOSAL 3/11/2022	10,925.00
Check	09/01/2022	6535 Accounts Payable	EQUIFAX INFORMATION SVCS LLC	50.48
	Invoice	Date	Description	Amount
	2052887588	08/13/2022	CREDIT BUREAU REPORT FEES	50.48
Check	09/01/2022	6536 Accounts Payable	EWING IRRIGATION PRODUCTS INC.	1,152.56
	Invoice	Date	Description	Amount
	17446169	07/29/2022	SLIP FIX REPAIR COUP	663.65
	17507168	08/05/2022	IRRIGATION SUPPLIES	417.64
	17446128	07/29/2022	IRRIGATION SUPPLIES - SLIP FIX REPAIR COUP	71.27
Check	09/01/2022	6537 Accounts Payable	FIDELITY SECURITY LIFE INSURANCE/EYEMED	2,341.44
	Invoice	Date	Description	Amount
	165403626	08/25/2022	EYE MED - COBRA (SEPTEMBER PREMIUMS)	59.19
	165414403	08/25/2022	EYE MED - SEPTEMBER PREMIUMS	2,282.25
Check	09/01/2022	6538 Accounts Payable	FRANK BONETTI PLUMBING INC	895.00
	Invoice	Date	Description	Amount
	71118	06/21/2022	TILE REPAIR	895.00
Check	09/01/2022	6539 Accounts Payable	FREMONT RUBBER STAMP CO INC	69.90

	Invoice	Date	Description	Amount
	174215	08/08/2022	STAMPS/DESK SIGNS FY 22/23	69.90
Check	09/01/2022	6540 Accounts Payable	FREMONT FORD	594.43
	Invoice	Date	Description	Amount
	203936	05/13/2022	FLEET PARTS AND SUPPLIES	594.43
Check	09/01/2022	6541 Accounts Payable	GAMETIME	4,135.96
	Invoice	Date	Description	Amount
	PJI-0189182	07/22/2022	BIRCH GROVE SWINGS AND SUPPLIES	4,135.96
Check	09/01/2022	6542 Accounts Payable	GEOCON CONSULTANTS, INC.	11,492.50
	Invoice	Date	Description	Amount
	221110204	11/22/2021	GEOTECH SERVICES CIVIC CENTER (THROUGH 10/31/21)	315.00
	221030205	04/14/2021	GEOTECH SERVICES CIVIC CENTER (THROUGH 3/21/21)	1,946.80
	221040210	05/14/2021	GEOTECH SERVICES CIVIC CENTER (THROUGH 4/18/21)	1,076.20
	221060336	07/06/2021	GEOTECH SERVICES CIVIC CENTER (THROUGH 06/13/21)	8,154.50
Check	09/01/2022	6543 Accounts Payable	GHA TECHNOLOGIES, INC.	15,488.17
	Invoice	Date	Description	Amount
	101233564	08/03/2022	HYCU 0365 BACKUP	10,635.00
	101234593	08/04/2022	RUBRIK SUPPLIES	149.05
	101234594	08/05/2022	APC SMART UPS	742.06
	101233829	08/03/2022	APC SMART UPS	1,357.89
	101234136	08/02/2022	RUBRIK SUPPLIES	421.95
	101234133	08/04/2022	RUBRIK SUPPLIES	2,182.22
Check	09/01/2022	6544 Accounts Payable	GRAINGER	24.17
	Invoice	Date	Description	Amount
	9390445444	07/26/2022	SUPPLIES	24.17
Check	09/01/2022	6545 Accounts Payable	GRANT MANAGEMENT USA	595.00
	Invoice	Date	Description	Amount
	WM0822-082022-21	08/23/2022	GRANT MANAGMENT TRAINING ADMISSION AUG 25-26, 2022: FCNZHKM2GTB	595.00
Check	09/01/2022	6546 Accounts Payable	HIROSHI ICHIMURA	2,973.60
	Invoice	Date	Description	Amount
	0709-08272022	08/27/2022	PAYMENT FOR KENDO 7/9 - 8/27/2022	2,973.60
Check	09/01/2022	6547 Accounts Payable	HOME DEPOT CREDIT SERVICES	1,997.79
	Invoice	Date	Description	Amount
	AUG' 22	08/12/2022	HD CC - SUPPLIES 0713-081022	1,997.79
Check	09/01/2022	6548 Accounts Payable	JARVIS FAY LLP	1,088.00
	Invoice	Date	Description	Amount
	16259	02/28/2022	LEGAL SERVICES FOR FMC WILLOW PROJECT - 2/22	1,088.00
Check	09/01/2022	6549 Accounts Payable	JOINT VENTURE SILICON VALLEY	9,869.00
	Invoice	Date	Description	Amount
	921EDANEWARK	06/12/2022	MEMBERSHIP SVEDA 22-23 ULI DUES	2,625.00
	941NETNEWARK	06/13/2022	JOINT VENTURE SILLICON VALLEY 22-23 MEMBERSHIP DUES	1,100.00

	967COSNEWARK	07/08/2022	COSTAR 22-23	6,144.00
Check	09/01/2022	6550 Accounts Payable	KNORR SYSTEMS INC	5,386.73
	Invoice	Date	Description	Amount
	PWSVI-7484	05/31/2022	SILLIMAN POOL REPAIR AND MAINTENANCE	5,386.73
Check	09/01/2022	6551 Accounts Payable	LANGUAGE LINE SERVICES	426.05
	Invoice	Date	Description	Amount
	10592614	07/31/2022	INTERPRETATION SVCS JULY 2022	426.05
Check	09/01/2022	6552 Accounts Payable	LEXISNEXIS RISK DATA MANAGEMENT INC.	424.20
	Invoice	Date	Description	Amount
	1415640-20220731	07/31/2022	BACKGROUND CHECKS JULY 2022	424.20
Check	09/01/2022	6553 Accounts Payable	MARK GOTHARD	2,623.84
	Invoice	Date	Description	Amount
	0616-08252022	08/25/2022	PAYMENT FOR KID SAFE KARATE 6/16-08/25/22	2,623.84
Check	09/01/2022	6554 Accounts Payable	MEDCOM	2,425.00
	Invoice	Date	Description	Amount
	7981A	07/22/2022	ANNUAL ACA EMPLOYER REPORTING-1ST 50%	2,425.00
Check	09/01/2022	6555 Accounts Payable	MICHAEL STEVEN YORKS	6,150.00
	Invoice	Date	Description	Amount
	2022-13	08/19/2022	BACKGROUND INVESTIGATIONS 07/29-08/25/22	3,075.00
	2022-12	08/03/2022	BACKGROUND CHECKS 07/26-08/02/22	3,075.00
Check	09/01/2022	6556 Accounts Payable	NETWORK CONTRACTING LLC	1,511.25
	Invoice	Date	Description	Amount
	3837	07/10/2022	NETWORK CONSULTING SERVICES - 07/5-7/8/2022	585.00
	3863	07/23/2022	NETWORK CONSULTING SERVICES 07/21-7/23/2022	390.00
	3866	07/29/2022	NETWORK CONSULTING SERVICES 07/25-7/26/22	341.25
	3891	08/12/2022	NETWORK CONSULTING SERVICES 08/09/22	97.50
	3828	07/03/2022	NETWORK CONSULTING - 6/27/22	97.50
Check	09/01/2022	6557 Accounts Payable	NAVIA BENEFIT SOLUTIONS CLIENT PAY	105.70
	Invoice	Date	Description	Amount
	10489029	07/28/2022	FY 22/23 COBRA ADMINISTRATION FEES	105.70
Check	09/01/2022	6558 Accounts Payable	KIDZ LOVE SOCCER	8,822.40
	Invoice	Date	Description	Amount
	0708-08212022	08/21/2022	PAYMENT FOR KIDZ LOVE SOCCER 7/8 - 8/21/22	8,822.40
Check	09/01/2022	6559 Accounts Payable	ROBERT NORVELL	71.18
	Invoice	Date	Description	Amount
	0627-062922EXP	08/18/2022	EXPENSE REIMBURSEMENT	71.18
Check	09/01/2022	6560 Accounts Payable	OCCUPATIONAL HEALTH CENTERS OF CALIFORNIA	122.00
	Invoice	Date	Description	Amount
	76113609	07/26/2022	PRE-EMPLOYMENT/ DOT PHYSICALS 07/26/2022	122.00

Check	09/01/2022	6561 Accounts Payable	PACIFIC GAS & ELECTRIC	28,808.01
	Invoice	Date	Description	Amount
	7786-082322	08/23/2022	ELELCTRICITY CHARGES FOR STREET/TRAFFIC LIGHTS (7/16/22-8/16/22)	25,912.82
	7460-081722	08/17/2022	ELECTRICITY CHARGES FOR STREET/TRAFFIC LIGHTS (6/25/22-7/26/22)	2,895.19
Check	09/01/2022	6562 Accounts Payable	PAKPOUR CONSULTING GROUP, INC.	1,796.82
	Invoice	Date	Description	Amount
	3862	08/02/2022	ON-CALL CIVIL ENGINEERING PLAN REVIEW SERVICES (7/1/22-7/31/22)	1,796.82
Check	09/01/2022	6563 Accounts Payable	PETERSON POWER SYSTEM INC	4,215.73
	Invoice	Date	Description	Amount
	SW240183626	07/31/2022	GENERATOR SERVICE	4,215.73
Check	09/01/2022	6564 Accounts Payable	PRO-STAR TOWING, INC.	292.00
	Invoice	Date	Description	Amount
	117167	07/06/2022	VEHICLE TOW CASE #22-02615	292.00
Check	09/01/2022	6565 Accounts Payable	PROVIDENT LIFE & ACCIDENT INSURANCE	261.24
	Invoice	Date	Description	Amount
	AUGUST PREMIUMS	08/25/2022	UNUM - UNUM INSURANCE*	261.24
Check	09/01/2022	6566 Accounts Payable	RELIABLE TRANSLATIONS INC.	2,052.00
	Invoice	Date	Description	Amount
	22518	08/11/2022	TRANSLATION SVCS. 8/11/22 MANDARIN, VIETNAMESE & SPANISH	756.00
	22579	08/18/2022	TRANSLATION SVCS. 8/18/22 MANDARIN, VIETNAMESE & SPANISH	648.00
	22631	08/25/2022	TRANSLATION SVCS. 8/25/22 MANDARIN, VIETNAMESE & SPANISH	648.00
Check	09/01/2022	6567 Accounts Payable	ROSS RECREATION EQUIPMENT, INC.	3,773.25
	Invoice	Date	Description	Amount
	I21081	05/31/2022	CIVIC CENTER SWINGS AND CLAMPS	3,773.25
Check	09/01/2022	6568 Accounts Payable	SFPUC	3,729.48
	Invoice	Date	Description	Amount
	55258	08/25/2022	SFPUC ACC#3642 08/25/2022	931.14
	55297	08/25/2022	SFPUC ACC#2866 08/25/2022	2,798.34
Check	09/01/2022	6569 Accounts Payable	SCHOOL SPORT, INC.	635.00
	Invoice	Date	Description	Amount
	22079	05/11/2022	SILLIMAN BASKETBALL SAFETY STRAP	635.00
Check	09/01/2022	6570 Accounts Payable	SIGNATURE CARPET ONE	989.00
	Invoice	Date	Description	Amount
	I-13126	12/22/2021	CARPET REPAIR	989.00
Check	09/01/2022	6571 Accounts Payable	SOUTHERN CALIFORNIA FORCE INSTRUCTORS ASSOCIATION	250.00
	Invoice	Date	Description	Amount
	0922-092322	08/24/2022	2022 USE OF FORCE SYMPOSIUM	250.00
Check	09/01/2022	6572 Accounts Payable	ANNE STEDLER	4,368.78
	Invoice	Date	Description	Amount

	041722-042322EXP	08/29/2022	ULI MEETING EXPENSES-PART I	1,756.32
	042022-042122EXP	08/29/2022	ULI MEETING EXPENSES-PART II	89.92
	060622-062022EXP	08/29/2022	BEND TRAINING EXPENSES-MEALS & REGISTRATION	401.02
	060322-060522EXP	08/29/2022	BEND TRAINING EXPENSES-TRAVEL & HOTEL	984.96
	022522EXP	08/29/2022	2022 ULI SPRING MEETING REGISTRATION	935.00
	092421EXP	08/30/2022	FEDEX CONSULTANT EMERGENCY CORRESPONDENCE	48.51
	012122EXP	08/30/2022	SUPPLIES FOR GIFT NEWARK COLLATERAL	24.24
	062922EXP	08/30/2022	EDIBLES FOR CHAMBER OF COMMERCE MEETING	128.81
Check	09/01/2022	6573 Accounts Payable	THE ED JONES CO INC	112.14
	Invoice	Date	Description	Amount
	51197	06/03/2022	BADGES & INSIGNIA - GOLD FILL TOP RIBBON FOR 514 BADGE; GRIESE	112.14
Check	09/01/2022	6574 Accounts Payable	HINDERLITER DE LLAMAS & ASSOCIATES	7,500.00
	Invoice	Date	Description	Amount
	SIN16103	03/31/2022	ECONOMIC DEVELOPMENT SVCS - 1/22 - 3/22	7,500.00
Check	09/01/2022	6575 Accounts Payable	TIDES CENTER - ABRIENDO PUERTAS/OPENING DOORS	2,798.00
	Invoice	Date	Description	Amount
	2022-0029	08/29/2022	PAYMENT FOR PROMOTORES AUGUST 2022 ONLINE TRAINING	2,798.00
Check	09/01/2022	6576 Accounts Payable	JENNIFER TRAN	23.38
	Invoice	Date	Description	Amount
	0701-072922EXP	07/29/2022	MILEAGE REIMBURSEMENT JULY 2022	23.38
Check	09/01/2022	6577 Accounts Payable	TURF STAR, INC.	230.21
	Invoice	Date	Description	Amount
	7239684-00	08/02/2022	TIRES	230.21
Check	09/01/2022	6578 Accounts Payable	URBAN PLANNING PARTNERS, INC.	3,766.25
	Invoice	Date	Description	Amount
	22002-220331	04/21/2022	PROJECT MGMT SERVICES - LEPAKSHI AT THORTON - 3/31/22	1,760.00
	22002-220430	05/30/2022	PROJECT MGMT SERVICES - LEPAKSHI AT THORTON - 04/22	1,462.50
	22002-220531	06/22/2022	PROJECT MGMT SERVICES - LEPAKSHI AT THORTON - 05/22	543.75
Check	09/01/2022	6579 Accounts Payable	BOSCO OIL INC DBA VALLEY OIL	34,033.31
	Invoice	Date	Description	Amount
	126692	08/30/2022	GASOLINE	26,093.43
	126693	08/30/2022	DIESEL FUEL	7,939.88
Check	09/01/2022	6580 Accounts Payable	VERIZON WIRELESS	3,510.21
	Invoice	Date	Description	Amount
	9913742315	08/18/2022	IPHONE SVC 07/19-08/18/22	3,510.21
Check	09/01/2022	6581 Accounts Payable	VISTA UNIVERSAL INC	1,640.51
	Invoice	Date	Description	Amount
	T512439	06/09/2022	LIGHT REPLACEMENT	1,640.51
Check	09/01/2022	6582 Accounts Payable	JOYCE WANG	716.20
	Invoice	Date	Description	Amount
	0912-091422ADV	08/24/2022	WLLE CONF 2022 ADV; 09/12-09/14/22	716.20

Check	09/01/2022	6583 Accounts Payable	WHOOSTER, INC.	599.00

Invoice	Date	Description	Amount
10002005543	08/18/2022	WHOOSTER LE SMS PLUS ANNUAL 07/27/22-07/28/23	599.00

Check	09/01/2022	6584 Accounts Payable	PORTUGUESE FRATERNAL SOCIETY OF AMERICA	3,578.26

Invoice	Date	Description	Amount
2023-0088	08/29/2022	ENCP2022-0156 RFND	3,578.26

EFT	09/01/2022	350 Accounts Payable	SPECTRUM SMALL BUSINESS SERVICES, LLC 325084426 / 5348560846	3,144.00

Invoice	Date	Description	Amount
07182022 GENERAL	07/18/2022	CONSULTING & REFERRAL TO BUSINESS SUPP. AGENCIES/3RDAMEND/6/2022	3,144.00

AP ZBA ACCOUNTS PAYABLE Totals:			Transactions: 89	$570,441.20

Checks:	88	$567,297.20
EFTs:	1	$3,144.00

LIVE Newark CA LIVE

Payment Batch Register

Bank Account: AP - ZBA ACCOUNTS PAYABLE

Batch Date: 09/08/2022

Type	Date	Number Source	Payee Name	EFT Bank/Account	Transaction Amount
Bank Account: AP - ZBA ACCOUNTS PAYABLE					
Check	09/08/2022	6625 Accounts Payable	UNITED STATES POSTMASTER		15,000.00

Invoice	Date	Description	Amount
BULK2023-1	08/12/2022	POSTAGE FOR CITY NEWSLETTER	15,000.00

AP ZBA ACCOUNTS PAYABLE Totals:			Transactions: 1	$15,000.00
	Checks:	1	$15,000.00	

STAFF REPORT

Item D. 2.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Sheila Harrington, City Clerk
SUBJECT	Approval of September 8, 2022 minutes

Attachments

Minutes

MINUTES

Thursday, September 8, 2022
7:00 P.M.

A. ROLL CALL

Vice Mayor Hannon called the meeting to order at 7:03 p.m. Present were Council Members Freitas, Collazo, and Bucci. Mayor Nagy was noted absent.

B. PRESENTATIONS

1. Introduction of employees

Vice Mayor Hannon introduced Building Inspector I Kyle Moore, Police Lieutenant Michelle Griese, and Information Technology Director and Chief Information Officer Ed Miranda.

2. Proclaiming September 15-18, 2022, as Newark Days

Vice Mayor Hannon presented the proclamation to members of Newark Days Celebration, Inc. He commented that this group made the celebration of the City's birthday a successful event each year.

David Fink introduced the Newark Days members present and announced the activities to be enjoyed during the four-day event. He credited Newark Days President Shirley Sisk with developing the current event along with her husband Frank in 1972.

Vice Mayor Hannon praised Shirley Sisk for her decades of leadership and volunteerism for the betterment of the community and presented her with a commendation to honor her dedication and retirement.

C. PUBLIC COMMENT

No one requested to speak.

D. CONSENT CALENDAR

Council Member Bucci moved, Council Member Collazo seconded, to approve Consent Calendar Items D.1 through D.5, that the resolutions be numbered consecutively, and that reading of the titles suffice for adoption of the resolutions. The motion passed, 4 AYES, 1 ABSENT.

1. Approval of Audited Demands

2. Approval of July 28, 2022, and August 25, 2022, meeting minutes

3. Adopt a motion, accepting the city manager's report on administrative actions during the August recess
Motion approved

4. Adopt a resolution accepting public subdivision improvements for Tract 8098 – Glass Bay, a 217-unit residential subdivision generally located in Bayside Newark on the southeast corner of Enterprise Drive and Willow Street
Resolution No. 11400

5. Authorize issuance of a no-fee encroachment permit to Newark Days Celebration, Inc. for the 65th annual Newark Days Parade, Newark Mile Race, and use of the Community Center and MacGregor Playfields
Motion approved

E. PUBLIC HEARINGS

1. CANCELED public hearing to consider (1) adoption of a resolution approving the following: an Amendment to the General Plan, an Amendment to the Bayside Newark Specific Plan, a Vesting Tentative Map, a Design Review, a Minor Use Permit, a Density Bonus Incentive, an Addendum to EIR (SC#2010042012), a Transit Station Dedication Agreement, an Alternate Means of Compliance to Payment of Housing Impact Fees, and Grand Park Agreement Amendment; and (2) introduction of an ordinance amending the Zoning Map; for approval of the FMC Willow and Grand Park project consisting of 279 residential units, 3,600 square feet of retail, 91 affordable housing units, and a 1,485 square foot community building

This public hearing was canceled and will be rescheduled for the September 22, 2022 City Council meeting.

2. Public hearing to adopt a resolution amending the Master Fee Schedule for Fiscal Year 2023
Resolution No. 11401

City Manager Benoun stated Building Inspection Division fees were inadvertently missed in the annual Master Fee update. He recommended approval of the proposed fees that range from permit application fees to plan check deposits to building permits.

Vice Mayor Hannon opened the public hearing at 7:29 p.m.

No one requested to speak.

Vice Mayor Hannon closed the public hearing at 7:29 p.m.

Council Member Freitas moved, Council Member Collazo seconded to adopt a resolution amending the Master Fee Schedule for Fiscal Year 2023. The motion passed, 4 AYES, 1 ABSENT.

F. OTHER BUSINESS

G. CITY COUNCIL MATTERS

Council Member Collazo commented on the excessive heat and reminded everyone to drink plenty of liquids. Shop Newark. She stated that she was excited for Newark Days.

Council Member Bucci shared that he met Shirley Sisk when he was eight years old, grew up with the League of Volunteers, and eventually volunteered with them. He reflected that she is a staple in the Newark Community, and it is hard to believe she is retiring. He congratulated her and wished her the best. He wished his daughter Kendra a happy eighth birthday.

Vice Mayor Hannon reiterated his colleagues' comments and added that the seniors in our community are our most vulnerable residents and should be checked on during the heat wave.

H. CLOSED SESSION

I. ADJOURNMENT

Vice Mayor Hannon adjourned the meeting at 7:34 p.m.

STAFF REPORT

Item D. 3.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Kristopher Kokotaylo, City Attorney
SUBJECT	Adopt a resolution confirming the continued existence of a local emergency due to the COVID-19 Pandemic

SUMMARY AND RECOMMENDATION

The City Council ratified a proclamation of local emergency on March 17, 2020, as a result of the COVID-19 Pandemic. The local emergency was confirmed by the Council in accordance with State law on the following dates: May 14, 2020, July 9, 2020, September 2, 2020, October 22, 2020, December 10, 2020, January 28, 2021, March 25, 2021, May 13, 2021, June 24, 2021, July 22, 2021, September 9, 2021, October 28, 2021, December 9, 2021, January 27, 2022, March 24, 2022, May 12, 2022, June 23, 2022, and July 28, 2022.

City staff recommends that the City Council confirm the continued existence of the local emergency in order to mobilize resources, seek reimbursement of related expenditures, and provide immunity to governmental officials for certain acts. Extending the local emergency would also continue many of the City's temporary policies that were adopted in response to the pandemic, including the eviction moratorium, changes to the zoning code to allow outdoor business activities, and the 15% cap on fees charged by food delivery providers to our local restaurants.

BACKGROUND

On March 16, 2020, the City Manager, acting as Director of Emergency Services, proclaimed a local emergency pursuant to California Government Code Section 8630 and Newark Municipal Code Chapter 2.16. The emergency declaration was based on conditions of extreme peril to the safety of persons and property within the City as a consequence of the global spread of the novel coronavirus 2019 ("COVID-19"), including confirmed cases in Alameda County. On March 17, 2020, the City Council adopted a resolution ratifying the Proclamation of Local Emergency issued by the Director of Emergency Services.

Pursuant to State law (see Government Code Section 8630), any City Council that declares a local emergency must confirm the existence of the local emergency every sixty (60) days until the local emergency ceases. Accordingly, the City Council adopted resolutions confirming the continued existence of the local emergency due to the COVID-19 Pandemic on the following dates: May 14, 2020, July 9, 2020,September 2,

2020, October 22, 2020, December 10, 2020, January 28, 2021, March 25, 2021, May 13, 2021, June 24, 2021, July 22, 2021, September 9, 2021, October 28, 2021, December 9, 2021, January 27, 2022, March 24, 2022, May 12, 2022, June 23, 2022, and July 28, 2022.

Various governmental agencies have declared an emergency as a result of the pandemic, including the President of the United States and the Governor of the State of California. Many cities in California have likewise declared a local emergency and have continued to confirm the existence of the local emergency within the statutorily required 60 day time period.

DISCUSSION/ANALYSIS

The conditions that prompted the original declaration of a local emergency continue to exist and health officials are still learning more information regarding the nature of COVID-19 and how it is transmitted. Community transmission of COVID-19 continues to occur, and the number of total cases within Alameda County continues to rise. Most recently, the “Omicron” variant, which is more easily transmitted, has led to an increase in COVID-19 cases within Alameda County. The public health and safety concerns for persons and property within the City as a consequence of the global spread of COVID-19 continue to exist.

At the time of this writing (September 8, 2022) there have been 323,847 confirmed cases within the County, with 11,003 of those cases being Newark residents. To date, there have been 1,941 deaths in our County that have been caused by COVID-19.

Declaring a state of emergency provides local governments with the power necessary to coordinate and implement plans aimed at protecting the community and property during a disaster. For example, a declaration of emergency is often necessary to secure mutual disaster aid from local, state, and federal agencies. This will also permit the Director of Emergency Services to promulgate orders and regulations necessary for the protection of life and property and ensures that the City and its officials and employees are immune from liability when exercising their official duties during this emergency.

Further, many of the City’s temporary policies that were adopted in response to the pandemic in order to support the local economy are tied to the expiration of the local emergency. This includes the eviction moratorium, the temporary zoning code changes to allow certain business to operate outdoors, and the 15% cap of fees charged by third party food delivery service providers to our local restaurants. If the local emergency is not extended, then these policies would automatically be rescinded.

If adopted, the declaration of emergency will remain in place until the emergency conditions have ended. However, the City Council will be required to continue to review the declaration at least every 60 days as indicated above.

FISCAL IMPACT

There is no direct fiscal impact associated with adopting the accompanying resolution that extends the local emergency. However, the City will consider all options available to seek reimbursement for expenses through appropriate authorities.

REVIEW AND APPROVAL

Prepared by - Kristopher J. Kokotaylo, City Attorney
Approved by - David J. Benoun, City Manager

Attachments

Continued Emergency Resolution

RESOLUTION NO. _____

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWARK CONFIRMING THE CONTINUED EXISTENCE OF A LOCAL EMERGENCY DUE TO COVID-19

WHEREAS, Government Code Section 8630 and Newark Municipal Code Section 2.16.060 authorize the Director of Emergency Services to proclaim a local emergency when conditions of disaster or extreme peril to the safety of persons and property within the territorial limits of a city exist if the City Council is not in session and provides that the City Council shall ratify the proclamation within seven days thereafter; and

WHEREAS, in accordance with Government Code Section 8630 and Newark Municipal Code Section 2.16.060, the Director of Emergency Services proclaimed the existence of a local emergency caused by the Novel Coronavirus (COVID-19), a respiratory disease first identified in China that may result in serious illness or death that is easily transmissible from person to person, on March 16, 2020; and

WHEREAS, on March 17, 2020, the City Council ratified and confirmed the proclamation of the existence of a local emergency issued by the Director of Emergency Services; and

WHEREAS, on May 14, 2020, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on July 9, 2020, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on September 2, 2020, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on October 22, 2020, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on December 10, 2020, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on January 28, 2021, the City Council adopted a resolution confirming the continued existence of the local emergency; and

WHEREAS, on March 25, 2021, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on May 13, 2021, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on June 24, 2021, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on July 22, 2021, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on September 9, 2021, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on October 28, 2021, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on December 9, 2021, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on January 27, 2022, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on March 24, 2022, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on May 12, 2022, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on June 23, 2022, the City Council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, on July 28, 2022, the City council adopted a Resolution confirming the continued existence of the local emergency; and

WHEREAS, pursuant to Government Code Section 8630 the City Council must periodically review the need for continuing the local emergency; and

WHEREAS, pursuant to Government Code Section 8630, the City Council must review the need for continuing the local emergency at least every sixty (60) days; and

WHEREAS, the conditions that prompted the original declaration of a local emergency continue to exist; and

WHEREAS, the recitals contained in Resolution No. 11031 adopted by the City Council on March 17, 2020, the recitals contained in Resolution No. 11048 adopted by the City Council on May 14, 2020, the recitals contained in Resolution No. 11100 adopted by the City Council on

July 9, 2020, the recitals contained in Resolution 1111 adopted by the City Council on September 2, 2020, the recitals contained in Resolution No. 11127 adopted by the City Council on October 22, 2020, the recitals contained in Resolution No. 11145 adopted by the City Council on December 10, 2020, the recitals contained in Resolution No. 11166 adopted by the City Council on January 28, 2021, the recitals contained in Resolution No. 11177 adopted by the City Council on March 25, 2021, the recitals contained in Resolution No. 11197 adopted by the City Council on May 13, 2021, the recitals contained in Resolution No. 11219 adopted by the City Council on June 24, 2021, the recitals contained in Resolution No. 11244 adopted by the City Council on July 22, 2021, the recitals contained in Resolution No. 11252 adopted by the City Council on September 9, 2021, the recitals contained in Resolution No. 11265 adopted by the City Council on October 28, 2021, the recitals contained in Resolution No. 11281 adopted by the City Council on December 9, 2021, the recitals contained in Resolution No. 11305 adopted by the City Council on January 27, 2022, the recitals contained in Resolution No. 11325 adopted by the City Council on March 24, 2022, and the recitals contained in Resolution No. 11343 adopted by the City Council on May 12, 2022 and the recitals contained in Resolution No. 11367 adopted by the City Council on June 23, 2022, and the recitals contained in the Resolution No. 11387 adopted by the City Council on July 28, 2022 are incorporated into this Resolution as if stated herein and recitals contained; and

WHEREAS, while there has been progress in mitigating the spread of COVID-19, community transmission of COVID-19 has continued to occur and health officials are still learning more information regarding the nature of COVID-19 and how it is transmitted. New variants of COVID-19 that are more easily transmissible, including the "Delta" and "Omicron" variants, have become more prevalent and present new risks; and

WHEREAS, as of December 20, 2021, the Omicron variant has been detected in most states and is rapidly increasing the proportion of COVID-19 cases it causes; and

WHEREAS, the number of cases within Alameda County has continued to rise, and there are now 323,847 confirmed cases of COVID-19 within the County, and 1,941 deaths as of September 8, 2022; and

WHEREAS, the public health and safety concerns for persons and property within the City as a consequence of the global spread of COVID-19 continue to exist; and

WHEREAS, the health, safety, and welfare of Newark residents, businesses, visitors, and staff is of utmost importance to the City and additional future measures may be needed to protect the community; and

WHEREAS, the City may require additional assistance in the future, and a formal declaration of emergency allows the City to access resources in a timely manner in a timely fashion; and

WHEREAS, the City Council finds that conditions of extreme peril to the safety of persons and property within the territorial limits of the City related to COVID-19 pandemic continue in existence; and

WHEREAS, the City Council finds that extraordinary measures are required to protect the public health, safety, and of persons and property within the City that are or are likely to be beyond the control or capability of the services, personnel, equipment, and facilities of the City; and

WHEREAS, the City Council desires to confirm the continued existence of a local emergency within the City of Newark due to COVID-19.

NOW, THEREFORE, BE IT RESOLVED that the Council of the City of Newark hereby declares as follows:

1. The local emergency declared by Resolution No. 11031 due to the COVID-19 pandemic continues to exist within the City of Newark.

2. During the existence of the declared local emergency, the powers, functions, and duties of the City Manager, acting as Director of Emergency Services, and the emergency organization of this City shall be those prescribed by State law and by ordinances and resolutions of the City of Newark.

3. The declaration of local emergency shall remain in effect until such time that the City Council determines that the emergency conditions have been abated.

4. City staff is directed to place an item on the agenda for review at least every sixty (60) days from the effective date of this Resolution to determine the need for continuing the local emergency pursuant to Government Code Section 8630.

STAFF REPORT

Item D. 4.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Kristopher Kokotaylo, City Attorney
SUBJECT	Adopt a resolution finding that there is a proclaimed state of emergency; finding that meeting in person would present imminent risks to the health or safety of attendees as a result of the state of emergency; and authorizing continued remote teleconferenced meetings of the legislative bodies of the City of Newark for the 30 day period beginning September 22 pursuant to AB 361

SUMMARY AND RECOMMENDATION

Since near the start of the COVID-19 pandemic the City has been able to conduct meetings of its legislative bodies remotely pursuant to Executive Order N-29-20, which suspended certain provisions of the Brown Act allowing the City to conduct its meetings virtually. On June 11, 2021, Governor Newsom issued an Executive Order that ends the clauses of Executive Order N-29-20 which suspended those provisions of the Brown Act on September 30, 2021. Governor Newsom signed AB 361 into law on September 16, 2021. AB 361 allows the City to continue conducting virtual meetings where the Governor has proclaimed a State of Emergency and state or local officials have imposed or recommended social distancing or where the City Council has declared the need to meet remotely due to imminent risks to the health or safety of attendees.

On September 23, 2021, the City Council made the necessary findings pursuant to AB 361 to continue to conduct virtual meetings. AB 361 requires that the City Council revisit the need to continue conducting virtual meetings every 30 days. The City Council last made the necessary findings on August 25, 2022.

Staff and the City Attorney recommend that the City Council adopt a resolution making the necessary findings pursuant to AB 361 to continue conducting virtual meetings. Absent further action of the City Council, the City's legislative bodies would need to continue in-person meetings 30 days after August 25, 2022.

BACKGROUND

On March 4, 2020, Governor Newsom declared a State of Emergency to make additional resources available, formalize emergency actions already underway across multiple state agencies and departments, and help the State address the broader spread of COVID-19.

On March 17, 2020, the City Council adopted a Resolution ratifying the proclamation of

a local state of emergency by the Director of Emergency Services due to COVID-19.On March 17, 2020, in response to the COVID-19 pandemic, Governor Newsom issued Executive Order N-29-20, which suspended certain provisions of the Brown Act in order to allow local legislative bodies to conduct meetings telephonically or by other means. Additionally, the State implemented a shelter-in-place order, requiring all non-essential personnel to work from home.

The City has established virtual meetings for all City Council and City Council appointed Board and Commission meetings. The virtual meetings have allowed the Council and advisory bodies to continue to conduct City business from remote locations while ensuring the public's continued access to government meetings in a safe manner.

On June 11, 2021, Governor Newsom issued Executive Order N-08-21, which among other things, rescinded certain clauses of Executive Order N-29-20 after September 30, 2021, including clauses that suspended certain provisions of the Brown Act. Thus, effective October 1, 2021, agencies would have had to transition back to public meetings held in full compliance with the Brown Act.

Since the Governor issued Executive Order N-08-21, the highly contagious Delta variant has emerged, causing a spike in cases throughout the state and within the Alameda County. Additionally, since then, the highly contagious Omicron variant and sub-variants BA.2, BA.2.12.1, and BA.5 have emerged, resulting in the greatest nationwide COVID-19 infection rate since the beginning of the COVID-19 pandemic. Currently, state and local officials strongly recommend wearing masks indoors. State officials further recommend the use of masks when social distancing is not possible.

On September 16, 2021, the Governor signed AB 361 (2021) which allows for local legislative and advisory bodies to continue to conduct meetings via teleconferencing under specified conditions and includes a requirement that the Council make specified findings. AB 361 took effect immediately.

The City Council adopted a resolution pursuant to AB 361 on September 23, 2021 in order to allow the City's legislative bodies to continue conducting virtual meetings after September 30, 2021. The resolution included all of the necessary findings required pursuant to AB 361. The City Council has adopted continued resolutions since that time.

DISCUSSION/ANALYSIS

The California Legislature approved AB 361 and the Governor signed the bill into law on September 16, 2021. AB 361 allows local legislative bodies to continue to meet remotely after the expiration of the clauses of Executive Order N-29-20 which suspended certain Brown Act provisions. Under AB 361, the City and its legislative bodies will be allowed to continue to meet remotely when:

- The local agency holds a meeting during a declared state of emergency;
- State or local health officials have imposed or recommended measures to promote social distancing;
- Legislative bodies declare the need to meet remotely due to present imminent risks to

the health or safety of attendees.

The City meets the requirements to continue holding meetings remotely in order to ensure the health and safety of the public:

• The Governor has declared a State of Emergency, and the City Council has ratified the proclamation of a local emergency by the Director of Emergency Services;
• The CDC recommends social distancing of at least six feet due to COVID-19, and CalOSHA recommends social distancing under certain circumstances and maintaining six feet of distance can avoid close contacts requiring quarantine;
• The Delta and Omicron variants of COVID-19 have resulted in a significant increase of COVID-19 cases within the state and throughout Alameda County;
• Meeting in person would present imminent risks to the health or safety of attendees, the legislative bodies, and staff.

Pursuant to AB 361, the City Council is required to declare every 30 days that the City's legislative bodies must continue to meet remotely in order to ensure the health and safety of the public.

The proposed resolution includes the necessary findings pursuant to AB 361 to allow the City Council and the City's legislative bodies to continue meeting remotely.

FISCAL IMPACT

There is no direct fiscal impact of adopting this Resolution.

REVIEW AND APPROVAL

Prepared by - Kristopher J. Kokotaylo, City Attorney
Approved by - David J. Benoun, City Manager

Attachments

AB 361 Resolution September 22

RESOLUTION NO. xxxx

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWARK FINDING THAT THERE IS A PROCLAIMED STATE OF EMERGENCY; FINDING THAT MEETING IN PERSON WOULD PRESENT IMMINENT RISKS TO THE HEALTH OR SAFETY OF ATTENDEES AS A RESULT OF THE STATE OF EMERGENCY; AND AUTHORIZING CONTINUED REMOTE TELECONFERENCED MEETINGS OF THE LEGISLATIVE BODIES OF THE CITY OF NEWARK FOR THE 30 DAY PERIOD BEGINNING SEPTEMBER 22 PURSUANT TO AB 361

WHEREAS, all meetings of the City of Newark's legislative bodies are open and public, as required by the Ralph M. Brown Act (Cal. Gov. Code 54950 – 54963), so that any member of the public may attend, participate, and watch the City's legislative bodies conduct their business; and

WHEREAS, on March 4, 2020, Governor Newsom declared a State of Emergency to make additional resources available, formalize emergency actions already underway across multiple state agencies and departments, and help the State prepare for a broader spread of the novel coronavirus disease 2019 ("COVID-19"); and

WHEREAS, on March 17, 2020, the City Council adopted a Resolution ratifying the proclamation of a local emergency by the Director of Emergency Services due to COVID-19; and

WHEREAS, on March 17, 2020, in response to the COVID-19 pandemic, Governor Newsom issued Executive Order N-29-20 suspending certain provisions of the Ralph M. Brown Act in order to allow local legislative bodies to conduct meetings telephonically or by other means; and

WHEREAS, as a result of Executive Order N-29-20, staff set up virtual meetings for all City Council meetings and meetings of all legislative bodies within the City; and

WHEREAS, on June 11, 2021, Governor Newsom issued Executive Order N-08-21, which, effective September 30, 2021, ends the provisions of Executive Order N-29-20 that allows local legislative bodies to conduct meetings telephonically or by other means; and

WHEREAS, on September 16, 2021, Governor Newsom signed AB 361 (2021) which allows for local legislative bodies and advisory bodies to continue to conduct meetings via teleconferencing under specified conditions and includes a requirement that the City Council make specified findings. AB 361 (2021) took effect immediately; and

WHEREAS, AB 361 (2021) requires that the Governor declare a State of Emergency pursuant to Government Code section 8625; and

WHEREAS, AB 361 (2021) further requires that state or local officials have imposed or recommended measures to promote social distancing, or, requires that the legislative body determines that meeting in person would present imminent risks to the health and safety of

attendees; and

WHEREAS, such conditions now exist in the City, specifically, Governor Newsom has declared a State of Emergency due to COVID-19; and

WHEREAS, since issuing Executive Order N-08-21, the highly contagious Delta and Omicron variants, in addition to Omicron sub-variants, of COVID-19 have emerged, causing an increase in COVID-19 cases throughout the State and Alameda County; and

WHEREAS, on August 3, 2021, in response to the Delta variant of COVID-19, the Alameda County Health Officer issued an order for nearly all individuals to wear masks when inside public spaces; and

WHEREAS, following the Alameda County Health Order the Omicron variant emerged and was designated as a variant of concern by the United States; and

WHEREAS, the emergence of the highly contagious Omicron variant has resulted in the greatest nationwide COVID-19 infection rate since the beginning of the COVID-19 pandemic; and

WHEREAS, the Centers for Disease Control and Prevention ("CDC") continues to recommend physical distancing of at least 6 feet from others outside of the household and CalOSHA recommends social distancing under certain circumstances and maintaining six feet of distance can avoid close contacts requiring quarantine. State and local officials currently strongly recommend wearing masks indoors and state officials further recommend the use of masks when social distancing is not possible; and

WHEREAS, because of the rise in cases due to the Delta and Omicron variant of COVID-19, and now the Omicron sub-variant, the City is concerned about the health and safety of all individuals who intend to attend City Council and meetings of the City's other legislative bodies; and

WHEREAS, on September 23, 2021, the City Council found that the presence of COVID-19 and the increase of cases due to the Delta variant would present imminent risks to the health or safety of attendees, including the legislative bodies and staff, should the City's legislative bodies hold in person meetings; and

WHEREAS, the highly contagious Omicron variant has since resulted in several highly contagious sub-variants, including the new BA.5, which has become the dominant strain of COVID-19; and

WHEREAS, due to the presence of the highly contagious Omicron sub-variants, especially BA.5, there has been an increase in hospitalizations within the state; and

WHEREAS, the City Council has subsequently found that the presence of COVID-19 and the number of cases due to the Delta and Omicron variants would present imminent risks to the health or safety of attendees, including the legislative bodies and staff, should the City's legislative bodies hold in person meetings; and

WHEREAS, the City Council finds that the imminent risks of the City's legislative

bodies holding in person meetings to the health or safety of attendees continues to exist due to the Delta and Omicron variants of COVID-19; and

WHEREAS, the City shall ensure that it's meetings comply with the provisions required by AB 361 (2021) for holding teleconferenced meetings.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Newark as follows:

1. The above recitals are true and correct, and incorporated into this Resolution.

2. In compliance with AB 361 (2021), and in order to continue to conduct teleconference meetings without complying with the usual teleconference meeting requirements of the Brown Act, the City Council makes the following continued findings:

   a) The City Council has reconsidered the circumstances of the state of emergency; and

   b) The state of emergency, as declared by the Governor and City Council, continues to directly impact the ability of the City Council and the City's legislative bodies, as well as staff and members of the public, from meeting safely in person; and

   c) The CDC continues to recommend physical distancing of at least six feet due to COVID-19, state and local officials continue to recommend wearing masks and physical distancing under certain circumstances, and as a result of the presence of COVID-19 and the increase of cases due to the Delta and Omicron variants, meeting in person would present imminent risks to the health or safety of attendees, the legislative bodies and staff.

3. City Council and City's legislative bodies may continue to meet remotely in compliance with AB 361, in order to better ensure the health and safety of the public.

4. The City Council will revisit the need to conduct meetings remotely within 30 days of the adoption of this resolution.

STAFF REPORT

Item D. 5.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Sheila Harrington, City Clerk
SUBJECT	Adopt a resolution amending the Conflict of Interest Code for nonelected officials and designated employees

The Political Reform Act of 1974 requires local government agencies to review its Conflict of Interest Code biennially. The Conflict of Interest Code (Code) lists each employee position that makes or participates in the making of governmental decisions. Employees in these positions are identified as "designated employees." Consultants that make or participate in making governmental decisions on behalf of the City must also file disclosure forms.

Department Heads were requested to review the Code and proposed changes to Appendix A. The review of the Code has been completed and there is a need to amend Appendix A, Designated Positions and Disclosure Categories, because of organizational changes that have occurred since the 2020 review. Appendix A to the Code shows the recommended changes with strikeout formatting for deletions and underscore formatting for additions.

Staff recommends that the City Council, by resolution, amend the City's Conflict of Interest Code for Nonelected Officials and Designated Employees.

Attachments

2020 Conflict of Interest Code
Resolution
Appendix A

RESOLUTION NO. 11,119

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWARK AMENDING THE CONFLICT OF INTEREST CODE OF NONELECTED OFFICIALS AND DESIGNATED EMPLOYEES OF THE CITY OF NEWARK

WHEREAS, the Political Reform Act, Government Code Section 87306.5, requires local government agencies to review their Conflict of Interest Codes biennially and, if a change in the Conflict of Interest Code is necessitated by changed circumstances, to prepare and submit an amended Conflict of Interest Code to the City Council; and

WHEREAS, the nonelected officials and designated employees of the City of Newark have reviewed their Conflict of Interest Code and find that there is a need to amend Appendix A, Designated Positions and Disclosure Categories;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Newark does hereby amend the Conflict of Interest Code of the Nonelected Officials and Designated Employees of the City of Newark.

I HEREBY CERTIFY the foregoing resolution was introduced at a regular meeting of the City Council of the City of Newark held on September 24, 2020, by Council Member Hannon who moved its adoption and passage, which motion was carried after being duly seconded, and passed by the following vote:

AYES: Council Members Collazo, Hannon, Vice Mayor Freitas and Mayor Nagy

NOES: None

ABSENT: Council Member Bucci

SECONDED: Council Member Collazo

APPROVED:

s/ALAN L. NAGY
Mayor

ATTEST:

s/SHEILA HARRINGTON
City Clerk

APPROVED AS TO FORM:

s/KRISTOPHER J. KOKOTAYLO
Interim City Attorney

APPENDIX A

DESIGNATED POSITIONS	*DISCLOSURE CATEGORY*
CITY MANAGER'S OFFICE	
Assistant City Manager	1, 2, 3, 4, 5, 6, 7, 8
City Clerk	1, 2, 5, 7
Executive Assistant	1, 2, 5, 7
Assistant to City Manager	1, 2, 5, 7
DESIGNATED COMMITTEE MEMBERS/EMPLOYEES	
~~Economic Development Corporation~~	~~1, 2, 3, 4, 5, 6, 7, 8~~
~~Successor Agency to Redevelopment Agency~~	~~1, 2, 3, 4, 5, 6, 7, 8~~
Measure GG Oversight Committee	1, 2, 3, 4, 5, 6, 7, 8
COMMUNITY DEVELOPMENT ~~and INFORMATION SYSTEMS DIVSION~~	
Community Development Director	1, 2, 3, 4, 5, 6, 7, 8
Deputy Community Development Director	1, 2, 3, 4, 5, 6, 7, 8
Economic Development Manager	1, 2, 3, 4, 5, 6, 7, 8
~~Assistant~~ Senior Planner	1, 2, 3, 4, 5, 7
Associate Planner	1, 2, 3, 4, 5, 7
~~Information Systems Manager~~	~~1, 2, 5, 6, 7~~
Community Preservation Manager	1, 2, 5, 7
FINANCE	
Finance ~~Manager~~Director	1, 2, 3, 4, 5, 6, 7, 8
Senior Accountant	1, 2, 3, 4, 5, 6, 7, 8
Accountant	1, 2, 3, 4, 5, 6, 7, 8
HUMAN RESOURCES DEPARTMENT and INFORMATION SYSTEMS DIVISION	
~~Human Resources Director~~	~~1, 2, 5, 7~~
Administrative Analyst	1, 2, 5, 7
Information Systems Manager	1, 2, 5, 6, 7
POLICE DEPARTMENT	
Police Chief	1, 2, 3, 4, 5, 6, 7, 8
Police Captain	1, 2, 5, 7
Police Lieutenant	1, 2, 5, 7
Senior Administrative Analyst	1, 2, 5, 7
PUBLIC WORKS	
Assistant City Engineer	1, 2, 3, 4, 5, 6, 7, 8
~~Bldg. Insp./Zoning Enforcement~~	~~1, 2, 3, 4, 5, 7~~
Chief Building Official/City Architect	1, 2, 3, 4, 5, 7
Assistant Engineer	1 2, 4, 5, 7
~~Maintenance Supervisor~~	~~1, 2, 5, 7~~
Maintenance Superintendent	1, 2, 4, 5, 6, 7
Public Works Director	1, 2, 3, 4, 5, 6, 7, 8
Public Works Inspector	1, 2, 4, 5, 7
Administrative Analyst	1, 2, 5, 7
Senior Civil Engineer	1, 2, 4, 5, 7
Junior Engineer	3, 4, 6
Senior Building Inspector	1, 2, 3, 4, 5, 7
~~Assistant Building Official~~	~~1, 2, 3, 4, 5, 7~~
Assistant Maintenance Superintendent	1, 2, 4, 5, 6, 7
Building Inspectors I/II	1, 2, 3, 4, 5, 7

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~~Resolution No. 10,844~~

RECREATION AND COMMUNITY SERVICES

Senior Administrative Analyst	1, 2, 5, 7
Recreation & Community Services Dir.	1, 2, 3, 4, 5, 6, 7, 8
Recreation Supervisor	1, 2, 5, 7
Senior Recreation Supervisor	1, 2, 5, 7

CONSULTANTS

Consultants shall be included in the list of designated employees and shall disclose pursuant to the broadest disclosure category in the code subject to the following limitation: The City Manager may determine in writing that a particular consultant, although a "designated position," is hired to perform a range of duties that is limited in scope and thus is not required to fully comply with the disclosure requirements in this section. Such written determination shall include a description of the consultant's duties and, based upon that description, a statement of the extent of disclosure requirements. The City Manager's determination is a public record and shall be retained for public inspection in the same manner and location as this conflict of interest code.

The following positions are not covered by the code because they must file under Government Code Section 87200 and are listed for informational purposes only:

City Attorney
City Council Members
City Manager
City Treasurer
Mayor
Planning Commissioners

City of Newark

Conflict of Interest Code

CONFLICT OF INTEREST CODE
CITY OF NEWARK

Table of Contents

Article I	Statutory Provisions
Article II	Provisions of Conflict of Interest Code
Section 1	Definitions
Section 2	Designated Employees
Section 3	Disclosure Categories
Section 4	Statement of Economic Interests: Place of Filing
Section 5	Statement of Economic Interests: Time of Filing
Section 6	Contents of and Period Covered by Statements of Economic Interests
Appendix A	Schedule of Designated Positions and Their Disclosure Categories
Appendix B	General Provisions and List of Disclosure Categories

CONFLICT OF INTEREST CODE
OF THE CITY OF NEWARK
NON-ELECTED OFFICIALS AND EMPLOYEES

ARTICLE I. STATUTORY PROVISIONS.

In compliance with the Political Reform Act of 1974, California Government Code Section 81000 et seq., and specifically with Section 87307 et seq., the City of Newark hereby amends its Conflict of Interest Code for non-elected officials and employees of the City. The requirements of this amended Code are in addition to other requirements of the Political Reform Act, such as the general prohibition against conflicts of interest contained in Government Code Section 87100, and are in addition to any other state or local laws pertaining to conflicts of interest.

Incorporation by reference of the terms of 2 California Administration Code Section 18730 along with the designation of employees and the formulation of disclosure categories in the Appendix referred to below constitute the amendment of a Conflict of Interest Code within the meaning of Government Code Section 87307 if the terms of this regulation are substituted for terms of a Conflict of Interest Code already in effect. A code so amended requires the reporting of reportable items in a manner substantially equivalent to the requirement of Article 2 of Chapter 7 of the Political Reform Act, Government Code Section 81000, et seq.

ARTICLE II. PROVISIONS OF CONFLICT OF INTEREST CODE.

Section 1. Definitions. The definitions contained in the Political Reform Act of 1974, regulations of the Fair Political Practices Commission (2Cal.Adm.Code Sections 18100 et seq.), and any amendments to the Act or regulations, are incorporated by reference into this Conflict of Interest Code.

Section 2. Designated Employees. The persons holding positions listed in Appendix A are designated employees. It has been determined that these persons make or participate in the making of decisions which may foreseeably have a material effect on financial interests.

Section 3. Disclosure Categories. This Code does not establish any disclosure obligation for those designated employees who are also specified in Government Code Section 87200 if they are designated in this Code in that same capacity or if the geographical jurisdiction of this City is the same as or is wholly included within the jurisdiction in which those persons must report their financial interests pursuant to Article 2 of Chapter 7 of the Political Reform Act, Government Code Sections 87200 et seq.[1]

Such persons are covered by this Code for disqualification purposes only. With respect to all other designated employees, the disclosure categories set forth in Appendix B specify which kinds of financial interests are reportable. Such a designated employee

shall disclose in his or her statement of economic interests those financial interests he or she has which are of the kind described in the disclosure categories to which he or she is assigned in Appendix A. It has been determined that the financial interests set forth in a designated employee's disclosure categories are the kinds of financial interests which he or she foreseeably can affect materially through the conduct of his or her office.

Section 4. Statement of Economic Interests: Place of Filing. All designated employees required to submit a statement of economic interest shall file such statements with the City Clerk, who shall be the filing officer.[2]

Section 5. Statement of Economic Interests: Time of Filing.

(a) Initial Statements. All designated employees employed by the City on the effective date of this Code, as originally adopted, promulgated and approved by the City Council, shall file statements within thirty days after the effective date of this Code. Thereafter, each person already in a position when it is designated by an amendment to this Code shall file an initial statement within thirty days after the effective date of the amendment.

(b) Assuming Office Statements. All persons assuming designated positions after the effective date of this Code shall file statements within thirty days after assuming the designated positions.

(c) Annual Statements. All designated employees shall file statements no later than April 1.

(d) Leaving Office Statements. All persons who leave designated positions shall file statements within thirty days after leaving office.

Section 6. Contents of and Period Covered by Statements of Economic Interests.

(a) Contents of Initial Statements. Initial statements shall disclose any reportable investments, interests in real property and business positions held on the effective date of the Code.

(b) Contents of Assuming Office Statements. Assuming office statements shall disclose any reportable investments, interests in real property and business positions held on the date of assuming office.

(c) Contents of Annual Statements. Annual statements shall disclose any reportable investments, interests in real property, income and business positions held or received during the previous calendar year provided, however, that the period covered by an employee's first annual statement shall begin on the effective date of the Code or the date of assuming office whichever is later.

(d) Contents of Leaving Office Statements. Leaving office statements shall disclose any reportable investments, interests in real property, income and business positions held or received during the period between the closing date of the last statement filed and the date of leaving office.

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[1]Designated employees who are required to file statements of economic interests under any other agency's conflict of interest code, or under Article 2 for a different jurisdiction, may expand their statement of economic interests to cover reportable interests in both jurisdictions, and file copies of this expanded statement with both entities in lieu of filing separate and distinct statements, provided that each copy of such expanded statement filed in place of an original is signed and verified by the designated employee as if it were an original. See Govt. Code Section 81004.

[2]See Govt. Code Section 81010 and 2 Cal. Admin. Code Section 18115 for the duties of filing officers and persons in agencies who make and return copies of statements and forward the originals to the filing officer.

APPENDIX A

DESIGNATED POSITIONS	*DISCLOSURE CATEGORY*
CITY MANAGER'S OFFICE	
Assistant City Manager	1, 2, 3, 4, 5, 6, 7, 8
City Clerk	1, 2, 5, 7
Executive Assistant	1, 2, 5, 7
Assistant to City Manager	1, 2, 5, 7
DESIGNATED COMMITTEE MEMBERS/EMPLOYEES	
Measure GG Oversight Committee	1, 2, 3, 4, 5, 6, 7, 8
COMMUNITY DEVELOPMENT	
Community Development Director	1, 2, 3, 4, 5, 6, 7, 8
Deputy Community Development Director	1, 2, 3, 4, 5, 6, 7, 8
Economic Development Manager	1, 2, 3, 4, 5, 6, 7, 8
Senior Planner	1, 2, 3, 4, 5, 7
Associate Planner	1, 2, 3, 4, 5, 7
Community Preservation Manager	1, 2, 5, 7
FINANCE	
Finance Director	1, 2, 3, 4, 5, 6, 7, 8
Senior Accountant	1, 2, 3, 4, 5, 6, 7, 8
Accountant	1, 2, 3, 4, 5, 6, 7, 8
HUMAN RESOURCES DEPARTMENT and INFORMATION SYSTEMS DIVISION	
Administrative Analyst	1, 2, 5, 7
Information Systems Manager	1, 2, 5, 6, 7
POLICE DEPARTMENT	
Police Chief	1, 2, 3, 4, 5, 6, 7, 8
Police Captain	1, 2, 5, 7
Police Lieutenant	1, 2, 5, 7
Senior Administrative Analyst	1, 2, 5, 7
PUBLIC WORKS	
Assistant City Engineer	1, 2, 3, 4, 5, 6, 7, 8
Chief Building Official/City Architect	1, 2, 3, 4, 5, 7
Assistant Engineer	1 2, 4, 5, 7
Maintenance Superintendent	1, 2, 4, 5, 6, 7
Public Works Director	1, 2, 3, 4, 5, 6, 7, 8
Public Works Inspector	1, 2, 4, 5, 7
Administrative Analyst	1, 2, 5, 7
Senior Civil Engineer	1, 2, 4, 5, 7
Junior Engineer	3, 4, 6
Senior Building Inspector	1, 2, 3, 4, 5, 7
Assistant Maintenance Superintendent	1, 2, 4, 5, 6, 7
Building Inspectors, I/II	1, 2, 3, 4, 5, 7
RECREATION AND COMMUNITY SERVICES	
Senior Administrative Analyst	1, 2, 5, 7
Recreation & Community Services Dir.	1, 2, 3, 4, 5, 6, 7, 8
Recreation Supervisor	1, 2, 5, 7
Senior Recreation Supervisor	1, 2, 5, 7

CONSULTANTS

Consultants shall be included in the list of designated employees and shall disclose pursuant to the broadest disclosure category in the code subject to the following limitation: The City Manager may determine in writing that a particular consultant, although a "designated position," is hired to perform a range of duties that is limited in scope and thus is not required to fully comply with the disclosure requirements in this section. Such written determination shall include a description of the consultant's duties and, based upon that description, a statement of the extent of disclosure requirements. The City Manager's determination is a public record and shall be retained for public inspection in the same manner and location as this conflict of interest code.

The following positions are not covered by the code because they must file under Government Code Section 87200 and are listed for informational purposes only:

City Attorney
City Council Members
City Manager
City Treasurer
Mayor
Planning Commissioners

APPENDIX B

GENERAL PROVISIONS

When a designated employee is required to disclose investments and sources of income, he or she need only disclose investments in business entities and sources of income which do business in the jurisdiction, plan to do business in the jurisdiction or have done business in the jurisdiction within the past two years. In addition to other activities, a business entity is doing business within the jurisdiction if it owns real property within the jurisdiction. When a designated employee is required to disclose interests in real property, he or she need only disclose real property which is located in whole or in part within or not more than two miles outside the boundaries of the jurisdiction or within two miles of any land owned or used by the local government agency.

Designated employees shall disclose their financial interests pursuant to the appropriate disclosure category as indicated in Appendix A.

DISCLOSURE CATEGORIES

Category 1: All investments and sources of income.

Category 2: All interests in real property.

Category 3: All investments, interests in real property and sources of income subject to the regulatory, permit or licensing authority of the department.

Category 4: Positions held and investments in business entities and sources of income which engage in land development, construction or the acquisition or sale of real property.

Category 5: Positions held and investments in business entities and sources of income of the type which, within the past two years, have contracted with the City of Newark to provide services, supplies, materials, machinery or equipment.

Category 6: Positions held and investments in business entities and sources of income of the type which, within the past two years, have contracted with the designated employee's department to provide services, supplies, materials, machinery or equipment.

Category 7: Positions held and investments in business entities located in the City of Newark proper or in any land or facilities used, owned, or operated by the City of Newark.

Category 8: Positions held and investments in business entities or investments with natural persons that have contractual obligations or privileges with the City of Newark.

RESOLUTION NO.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWARK AMENDING THE CONFLICT OF INTEREST CODE OF NONELECTED OFFICIALS AND DESIGNATED EMPLOYEES OF THE CITY OF NEWARK

WHEREAS, the Political Reform Act, Government Code Section 87306.5, requires local government agencies to review their Conflict of Interest Codes biennially and, if a change in the Conflict of Interest Code is necessitated by changed circumstances, to prepare and submit an amended Conflict of Interest Code to the City Council; and

WHEREAS, the nonelected officials and designated employees of the City of Newark have reviewed their Conflict of Interest Code and find that there is a need to amend Appendix A, Designated Positions and Disclosure Categories;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Newark does hereby amend the Conflict of Interest Code of the Nonelected Officials and Designated Employees of the City of Newark.

APPENDIX A

DESIGNATED POSITIONS	*DISCLOSURE CATEGORY*
CITY MANAGER'S OFFICE	
Assistant City Manager	1, 2, 3, 4, 5, 6, 7, 8
City Clerk	1, 2, 5, 7
Executive Assistant	1, 2, 5, 7
Assistant to City Manager	1, 2, 5, 7
Administrative Analyst	1, 2, 5, 7
DESIGNATED COMMITTEE MEMBERS/EMPLOYEES	
Measure GG Oversight Committee	1, 2, 3, 4, 5, 6, 7, 8
COMMUNITY DEVELOPMENT	
Community Development Director	1, 2, 3, 4, 5, 6, 7, 8
Deputy Community Development Director	1, 2, 3, 4, 5, 6, 7, 8
Economic Development Manager	1, 2, 3, 4, 5, 6, 7, 8
Senior Planner	1, 2, 3, 4, 5, 7
Associate Planner	1, 2, 3, 4, 5, 7
Community Preservation Manager	1, 2, 5, 7
FINANCE	
Finance Director	1, 2, 3, 4, 5, 6, 7, 8
Senior Accountant	1, 2, 3, 4, 5, 6, 7, 8
Accountant	1, 2, 3, 4, 5, 6, 7, 8
Accounting Manager	1, 2, 3, 4, 5, 6, 7, 8
HUMAN RESOURCES	
Human Resources Director	1, 2, 3, 4, 5, 6, 7, 8
Administrative Analyst	1, 2, 5, 7
INFORMATION TECHNOLOGY	
Chief Information Officer/Info. Tech. Dir.	1, 2, 3, 4, 5, 6, 7, 8
POLICE	
Police Chief	1, 2, 3, 4, 5, 6, 7, 8
Police Captain	1, 2, 5, 7
Police Lieutenant	1, 2, 5, 7
Senior Administrative Analyst	1, 2, 5, 7
Community Engagement Manager	1, 2, 5, 6
Support Services Manager	1, 2, 5, 6
PUBLIC WORKS	
Assistant City Engineer	1, 2, 3, 4, 5, 6, 7, 8
Chief Building Official	1, 2, 3, 4, 5, 7
City Architect	1, 2, 3, 4, 5, 6, 7, 8
Assistant Engineer	1 2, 4, 5, 7
Maintenance Superintendent	1, 2, 4, 5, 6, 7
Public Works Director	1, 2, 3, 4, 5, 6, 7, 8
Public Works Inspector	1, 2, 4, 5, 7
Administrative Analyst	1, 2, 5, 7
Senior Civil Engineer	1, 2, 4, 5, 7
Junior Engineer	3, 4, 6

Senior Building Inspector	1, 2, 3, 4, 5, 7
Assistant Maintenance Superintendent	1, 2, 4, 5, 6, 7
Building Inspectors, I-II	1, 2, 3, 4, 5, 7
Environmental Services Manager	1, 2, 3, 4, 5, 6, 7, 8

RECREATION AND COMMUNITY SERVICES

Senior Administrative Analyst	1, 2, 5, 7
Recreation & Community Services Dir.	1, 2, 3, 4, 5, 6, 7, 8
Recreation & Community Services Mgr.	1, 2, 3, 4, 5, 6, 7, 8
Recreation Supervisor	1, 2, 5, 7
Senior Recreation Supervisor	1, 2, 5, 7

CONSULTANTS

Consultants shall be included in the list of designated employees and shall disclose pursuant to the broadest disclosure category in the code subject to the following limitation: The City Manager may determine in writing that a particular consultant, although a "designated position," is hired to perform a range of duties that is limited in scope and thus is not required to fully comply with the disclosure requirements in this section. Such written determination shall include a description of the consultant's duties and, based upon that description, a statement of the extent of disclosure requirements. The City Manager's determination is a public record and shall be retained for public inspection in the same manner and location as this conflict of interest code.

The following positions are not covered by the code because they must file under Government Code Section 87200 and are listed for informational purposes only:

City Attorney
City Council Members
City Manager
City Treasurer
Mayor
Planning Commissioners

STAFF REPORT

Item D. 6.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Jayson Imai, Assistant City Engineer
SUBJECT	Adopt a resolution approving Amendment No. 1 to the Contractual Services Agreement with GHD Inc. for additional traffic engineering and transportation planning services and amendment of the 2022-2024 Biennial Budget

SUMMARY AND RECOMMENDATION

Staff recommends that the City Council approve an amendment the Contractual Services Agreement with GHD Inc. to increase the not-to-exceed amount to five hundred thousand dollars ($500,000.00) per Fiscal Year and amend the 2022-2024 Biennial Budget and Capital Improvement Plan to transfer $93,000 from the General Fund Unappropriated Fund Balance to Railroad Quiet Zone Study, Project 1276.

GHD Inc. is currently under contract with the City to provide on-call traffic engineering and transportation planning services. The not-to-exceed amount of GHD Inc.'s Contractual Services Agreement for fiscal year 2023 is $25,000. Pursuant to their On-Call Agreement, GHD Inc. has submitted a scope and fee proposal for $92,587 to develop preliminary designs and cost estimates for the installation of safety improvements at each of the nine at-grade railroad crossings identified in the City's recently completed Quiet Zone Study. These preliminary designs and cost estimates could be used to support Newark's potential application for the Federal Railroad Administration's (FRA) Railroad Crossing Elimination (RCE) grant program. The increased not-to-exceed amount would allow a Task Order to be issued to GHD Inc. for the development of preliminary design and cost estimates for quiet zone safety improvements. In addition, the increased not-to-exceed amount would also allow a future Task Order to be issued to GHD Inc. for the anticipated development of final construction documents for the installation of safety measures required to establish quiet zones at each of the nine identified railroad crossings.

BACKGROUND

In June 2020, the City awarded an On-Call Contractual Services Agreement to GHD Inc. for traffic engineering and transportation planning services with an annual not-to-exceed amount of $15,000 per Fiscal Year. This not-to-exceed amount was initially based on Public Works Engineering Division's Operating Budget for Contractual Services and reflected non-personnel reductions in the 2020-2022 Biennial Budget. In June 2022, pursuant to the terms of the Agreement, the City extended the term of the Agreement for an additional year through June 30, 2023, with a not-to exceed amount

of $25,000. This Not-to-Exceed amount was again based on Public Works Engineering Division's Operating Budget for Contractual Services in the 2022-2024 Biennial Budget.

The Engineering Division has often required professional services from on-call consultants related to projects funded by sources outside of the Division's Operating Budget, such as those funded as part of the Capital Improvement Program. The costs for these services often exceed the not-to-exceed amounts established by the Engineering Division's Operating Budget.

In June 2022, the Federal Railroad Administration (FRA) issued a Notice of Funding Opportunity (NOFO) for the new Railroad Crossing Elimination (RCE) Program authorized by the Bipartisan Infrastructure Law (Infrastructure Investment and Jobs Act). The purpose of the RCE program is to support railroad-roadway crossing improvement projects that improve the safety and mobility of people and goods. GHD Inc. has submitted a scope and fee proposal in the amount of $92,587 for on-call traffic engineering and transportation planning services in support of the preparation of Newark's RCE grant applications for the establishment of quiet zones at the nine railroad crossings identified in the City's recently completed Quiet Zone Study.

DISCUSSION/ANALYSIS

Staff recommends approving an amendment to the Contractual Services Agreement with GHD Inc. to increase the not-to-exceed amount to five hundred thousand dollars ($500,000.00) per Fiscal Year. This increased not-to-exceed amount would no longer be limited only to the Engineering Division's Operating Budget. Instead, services performed under this Agreement would be authorized by the Public Works Director through written Task Orders which identify the approved budgetary source. The increased not-to-exceed amount would allow such Task Orders to be issued to GHD Inc. for traffic engineering services related to the preparation of Newark's RCE grant application as well as the anticipated development of final construction documents for the installation of safety measures required to establish quiet zones at each of the nine identified railroad crossings.

FISCAL IMPACT

There is no fiscal impact associated with amending the Contractual Services Agreement with GHD Inc. to increase the not-to-exceed amount, as Task Orders related to the Agreement may only be authorized for projects with previously identified and approved budgetary sources. However, staff does recommend amending the 2022-2024 Biennial Budget to transfer $93,000 from the General Fund Unappropriated Fund Balance to Railroad Quiet Zone Study, Project 1276 for Fiscal Year 2023 for the preparation of Newark's RCE grant application. There are sufficient reserves in the General Fund Unappropriated Fund Balance to facilitate the fund transfer.

REVIEW AND APPROVAL

Prepared by - Jayson Imai, Assistant City Engineer
Reviewed by - Kristopher J. Kokotaylo, City Attorney
Approved by - David J. Benoun, City Manager

Attachments

GHD Resolution

Amendment No. 1 to Agreement

RESOLUTION NO.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWARK APPROVING AMENDMENT NO. 1 TO THE CONTRACTUAL SERVICES AGREEMENT WITH GHD INC. FOR TRAFFIC ENGINEERING AND TRANSPORTATION PLANNING SERVICES AND APPROVING AN AMENDMENT TO THE BIENNIAL BUDGET

WHEREAS, the City of Newark awarded a Contractual Services Agreement to GHD Inc. for on-call traffic engineering and transportation planning services; and

WHEREAS, pursuant to Section 18 of the Agreement entitled, "Term/Termination" the City elected to extend the Agreement for an additional one (1) year term from July 1, 2022 through June 30, 2023 with a not-to-exceed amount of $25,000; and

WHEREAS, staff has identified a need to amend the Contractual Services Agreement to increase the not-to exceed amount; and

WHEREAS, an amendment to the 2022-2024 Biennial Budget and Capital Improvement Plan for fiscal year 2023 is necessary to appropriate funds for the Railroad Quiet Zone Study.

NOW THEREFORE, BE IT RESOLVED that the City Council does hereby approve Amendment No. 1 to the Contractual Services Agreements with GHD Inc. to increase the not-to-exceed amount of the Contractual Services Agreement to Five Hundred Thousand Dollars ($500,000) per Fiscal Year, with any written task orders approved by the Public Works Director based on previously approved budgetary sources.

BE IT FURTHER RESOLVED that the City Council does hereby authorize the City Manager to execute the above Contractual Services Agreement amendment, on file with the City Clerk, in a form approved by the City Attorney.

BE IT FURTHER RESOLVED that the City Council does hereby authorize an amendment to the 2022-2024 Biennial Budget and Capital Improvement Plan for the fiscal year 2023 by appropriating $93,000 as follows:

To:	610.90.094.940.6221	CIP1276 (Railroad Quiet Zone Study)	$93,000.00
From:	110.3000	Unappropriated Fund Balance	$93,000.00

AMENDMENT NO. 1

CONTRACTUAL SERVICES AGREEMENT

CONSULTANTS

This Amendment No. 1 to that certain Contractual Services Agreement between the City of Newark and **GHD INC.** dated June 25, 2020 (hereinafter "Amendment") is made and entered into this ___ day of _____, 2022 by and between the **CITY OF NEWARK**, a municipal corporation ("City"), and **GHD INC.** a California corporation ("Consultant"). City and Consultant may be collectively referred to herein as the "Parties."

W I T N E S S E T H:

WHEREAS, City and Consultant entered into an agreement entitled CONTRACTUAL SERVICES AGREEMENT (hereinafter "Agreement") dated June 25, 2020, by which the Consultant agreed to perform on-call traffic engineering and transportation planning services for the City; and

WHEREAS, pursuant to Section 18 of the Agreement entitled, "Term/Termination" the City elected to extend the Agreement for an additional one (1) year term from July 1, 2022 through June 30, 2023 with a not-to-exceed amount of $25,000; and

WHEREAS, the Parties desire to modify the Agreement as set forth herein.

NOW, THEREFORE, the Parties hereto agree as follows:

1. The below referred paragraphs in the Agreement are deleted in their entirety and replaced with the following paragraphs:

3. COMPENSATION.

A. "Not to Exceed" Compensation. City shall compensate Consultant for all Services performed by Consultant hereunder in an amount based upon Consultant's hourly or other rates set forth in Exhibit "B". The payments specified in Exhibit "B" shall be the only payments to be made to Consultant for Services rendered pursuant to this Agreement.

Notwithstanding the foregoing, the combined total of compensation and costs payable hereunder shall not exceed the sum of Five Hundred Thousand and No/100 Dollars ($500,000.00) per fiscal year (July 1st – June 30th) unless the performance of services and/or reimbursement of costs and expenses in excess of said amounts have been approved in advance of performing such services or incurring such costs and expenses by City, evidenced in writing authorizing such additional amount.

2. **INCORPORATION BY REFERENCE**. This Amendment hereby incorporates by reference all terms and conditions set forth in the Agreement, unless specifically modified by this Amendment. All terms and conditions set forth in the Agreement which are not specifically modified by this Amendment shall remain in full force and effect.

3. **SIGNATURES**. The individuals executing this Agreement represent and warrant that they have the right, power, legal capacity, and authority to enter into and to execute this Amendment on behalf of the respective legal entities of Consultant and City. This Amendment shall inure to the benefit of and be binding upon the Parties hereto and their respective successors and assigns.

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment the day and year first hereinabove written.

CITY OF NEWARK,
a municipal corporation

By _____
City of Newark

Date _____

GHD INC.
a California corporation

By Peter J Galloway

Date 9/12/2022

PETER GALLOWAY
Printed Name

Attest:

_____
City Clerk

Date _____

Approved as to form:

_____
City Attorney

Date _____

STAFF REPORT

Item D. 7.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Gina Anderson, Chief of Police
SUBJECT	Adopt a Resolution authorizing the acceptance of the Selective Traffic Enforcement Program (STEP) grant through the State of California Office of Traffic Safety (OTS) and amending the 2022-2024 Biennial Budget

SUMMARY AND RECOMMENDATION

The Newark Police Department has been selected to receive a Selective Traffic Enforcement Program (STEP) grant in the amount of $100,000. Traffic-related concerns in our community continue to be a high priority for our residents, including speeding vehicles, stop sign violations in residential areas, and "sideshow" activities in our industrial sectors. Funding from this grant will assist us in reducing the number of injury crashes and allow us to promote a safer vehicle and pedestrian environment through enforcement, education, and evaluation.

Staff recommends that the City Council, by resolution, authorize the City to accept the 2022-2023 Selective Traffic Enforcement Program (STEP) grant through the State of California Office of Traffic Safety (OTS) and amend the 2022-2024 Biennial Budget.

BACKGROUND

The State of California Office of Traffic Safety (OTS) is providing funds to local law enforcement agencies through their Selective Traffic Enforcement Program (STEP) grant. The goal of this grant is to reduce the number of persons killed and injured in traffic collisions involving alcohol and other primary collision factors. The funded strategies may include impaired driving enforcement, enforcement operations focusing on primary crash factors, distracted driving, nighttime seat belt enforcement, special enforcement operations encouraging motorcycle safety, enforcement, and public awareness in areas with a high number of bicycle and pedestrian crashes, and educational programs. These strategies are designed to earn media attention, thus enhancing the overall deterrent effect.

DISCUSSION/ANALYSIS

Over the past several years, the City of Newark has seen tremendous residential growth as well as companies moving here due to our centralized Bay Area location. We have experienced a steady increase in commuter, commercial delivery, pedestrian, and bicycle traffic despite the global economic impact as a result of the pandemic. During this last federal fiscal year (Sept 2020 – Oct 2021), the City of

Newark saw a 9% increase in total crashes and a 28% increase in the number of people injured. As of July 30th of this current federal fiscal year (Sept 2021 – Oct 2022), we have seen an 11.8% decrease in the number of people injured in collisions and a 27% decrease in alcohol-related collision injuries. The police department will continue to focus on high-visibility enforcement, including pedestrian/bicycle violations, persons driving under the influence, and other identified primary crash factors. Our continued partnership with OTS and our emphasis on education, enforcement, and evaluation will create a safer vehicle and pedestrian environment on our roadways.

This grant funding will allow us to address these traffic-related issues, which are a high priority for our community members. Program objectives include:

Participation in national OTS campaigns such as National Walk to School Day, National Teen Driver Safety Week, NHTSA Summer and Winter Mobilizations, National Distracted Driving Awareness Month, National Motorcycle and Bicycle Safety Months, National Click It or Ticket Mobilization, National Child Passenger Safety Week, and California's Pedestrian Safety Month.

Maintain a "HOT Sheet" program to notify patrol and traffic officers to be on the lookout for identified repeat DUI offenders.

Send officers to Standard Field Sobriety Testing (SFST), Advanced Roadside Impaired Driving Enforcement (ARIDE), Drug Recognition Expert (DRE), and other appropriate training that support the grant goals and objectives and/or traffic safety.

Conduct highly publicized Distracted Driving enforcement operations, DUI/Driver's License checkpoints, DUI saturation patrols, traffic enforcement, pedestrian/bicycle enforcement operations, traffic safety educational presentations, and highly visible collaborative DUI and Traffic enforcement operations.

FISCAL IMPACT

Grant funding in the amount of $100,000 will be utilized for:

Personnel to conduct highly publicized Distracted Driving enforcement operations, DUI/Driver's License checkpoints, DUI saturation patrols, traffic enforcement, pedestrian/bicycle enforcement operations, traffic safety educational presentations, and highly visible collaborative DUI and Traffic enforcement operations.

Training for officers, including Standard Field Sobriety Testing (SFST), Advanced Roadside Impaired Driving Enforcement (ARIDE), Drug Recognition Expert (DRE), and other appropriate trainings that support the grant goals and objectives and/or traffic safety.

Other direct costs, include DUI checkpoint supplies needed to conduct sobriety checkpoints such as traffic cones, traffic signs, high visibility vests, generators, lighting, reflective banners, electronic flares, canopies, etc.

A budget amendment is necessary to accept the funds and place them into the appropriate accounts:

Fund Number	Description	Amount
233.30.031.310.4793.OTS.STEP.PT23054	Federal Grant Revenue	$100,000
233.30.031.310.5140.OTS.STEP. PT23054	Personnel Costs	$83,351
233.30.031.310.6120.OTS.STEP. PT23054	Supplies	$12,498
233.30.031.310.6450.OTS.STEP. PT23054	Training	$4,151

REVIEW AND APPROVAL

Prepared by - Brian Simon, Lieutenant
Reviewed by - Gina Anderson, Chief
Reviewed by - Kristopher J. Kokotaylo, City Attorney
Approved by - David J. Benoun, City Manager

Attachments

OTS Grant Resolution

Exhibit A - OTS Grant Agreement

RESOLUTION NO.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWARK AUTHORIZING THE ACCEPTANCE OF THE SELECTIVE TRAFFIC ENFORCEMENT PROGRAM (STEP) GRANT THROUGH THE STATE OF CALIFORNIA OFFICE OF TRAFFIC SAFETY (OTS) AND AMEND THE 2022-2024 BIENNIAL BUDGET

WHEREAS, the State of California Office of Traffic Safety (OTS) allocates funds to provide equipment and funding to staff for Driving Under the Influence (DUI) enforcement and awareness programs to reduce DUI related collisions, thereby reducing injuries and fatalities to our citizens and improving public safety; and

WHEREAS, goals of the Newark Police Department include reducing the number of persons killed and injured in traffic collisions involving alcohol and other primary collision factors, and to increase the efficiency within the traffic records division; and

WHEREAS, pedestrian and bicyclist safety as well as vehicle speeding and stop sign violations have been significant citizen concerns over the past several years; and

WHEREAS, program objectives include: 1) participation in national OTS campaigns such as Bicycle and Pedestrian Safety Month, Distracted Driving Awareness Month, and National Click It or Ticket Mobilizations; 2) maintaining a "HOT Sheet" program to notify patrol and traffic officers to be on the lookout for identified repeat DUI offenders; 3) sending officers to Standard Field Sobriety Testing (SFST) and Advanced Roadside Impaired Driving Enforcement (ARIDE) training; and 4) conducting highly publicized Distracted Driving, Click It or Ticket, DUI/Driver's License Checkpoints, DUI saturation, traffic enforcement, pedestrian/bicycle enforcement; and sideshow enforcement operations; and

WHEREAS, the Newark Police Department has been awarded Selective Traffic Enforcement Program (STEP) grant funding through the OTS in the amount of $100,000; and

WHEREAS, the funding will be utilized for personnel costs required to conduct operations/enforcement; purchase DUI checkpoint supplies; cover expenses training which supports the grant goals and objectives and/or traffic safety; and

WHEREAS, the project period is October 1, 2022, through September 30, 2023.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Newark hereby:

1) Authorizes the acceptance of the State of California Office of Traffic Safety (OTS) Selective Traffic Enforcement Program (STEP) grant in the amount of $100,000 as attached in Exhibit A.

2) Approve an amendment to the 2022-2024 Biennial Budget and Capital Improvement Plan as follows:

Fund Number		Amount
233.30.031.310.4793.OTS.STEP.PT23054	Federal Grant Revenue	$100,000
233.30.031.310.5140.OTS.STEP.PT23054	Personnel Costs	$ 83,351
233.30.031.310.6120.OTS.STEP.PT23054	Supplies	$ 12,498
233.30.031.310.6450.OTS.STEP.PT23054	Training	$ 4,151

1. GRANT TITLE
Selective Traffic Enforcement Program (STEP)

2. NAME OF AGENCY
Newark Police Department

3. Grant Period
From: 10/01/2022
To: 09/30/2023

4. AGENCY UNIT TO ADMINISTER GRANT
Newark Police Department

5. GRANT DESCRIPTION
Best practice strategies will be conducted to reduce the number of persons killed and injured in crashes involving alcohol and other primary crash factors. The funded strategies may include impaired driving enforcement, enforcement operations focusing on primary crash factors, distracted driving, night-time seat belt enforcement, special enforcement operations encouraging motorcycle safety, enforcement and public awareness in areas with a high number of bicycle and pedestrian crashes, and educational programs. These strategies are designed to earn media attention thus enhancing the overall deterrent effect.

6. Federal Funds Allocated Under This Agreement Shall Not Exceed: $100,000.00

7. TERMS AND CONDITIONS: The parties agree to comply with the terms and conditions of the following which are by this reference made a part of the Agreement:

- Schedule A – Problem Statement, Goals and Objectives and Method of Procedure
- Schedule B – Detailed Budget Estimate and Sub-Budget Estimate (if applicable)
- Schedule B-1 – Budget Narrative and Sub-Budget Narrative (if applicable)
- Exhibit A – Certifications and Assurances
- Exhibit B* – OTS Grant Program Manual
- Exhibit C – Grant Electronic Management System (GEMS) Access

*Items shown with an asterisk (*), are hereby incorporated by reference and made a part of this agreement as if attached hereto.

These documents can be viewed at the OTS home web page under Grants: www.ots.ca.gov.

We, the officials named below, hereby swear under penalty of perjury under the laws of the State of California that we are duly authorized to legally bind the Grant recipient to the above described Grant terms and conditions.
IN WITNESS WHEREOF, this Agreement has been executed by the parties hereto.

8. Approval Signatures

A. GRANT DIRECTOR
NAME: Brian Simon
TITLE: Lieutenant
EMAIL: brian.simon@newark.org
PHONE: (510) 578-4995
ADDRESS: 37077 Newark Blvd.
Newark, CA 94560

(Signature) *(Date)*

B. AUTHORIZING OFFICIAL
NAME: Gina Anderson
TITLE: Chief
EMAIL: gina.anderson@newark.org
PHONE: (510) 578-4220
ADDRESS: 37077 Newark Blvd.
Newark, CA 94560

(Signature) *(Date)*

C. FISCAL OFFICIAL
NAME: Michelle Villanueva
TITLE: Senior Accountant
EMAIL: michelle.villanueva@newark.org
PHONE: (510) 578-4310
ADDRESS: 37101 Newark Blvd.
Newark, CA 94560

(Signature) *(Date)*

D. AUTHORIZING OFFICIAL OF OFFICE OF TRAFFIC SAFETY
NAME: Barbara Rooney
TITLE: Director
EMAIL: barbara.rooney@ots.ca.gov
PHONE: (916) 509-3030
ADDRESS: 2208 Kausen Drive, Suite 300
Elk Grove, CA 95758

(Signature) *(Date)*

E. ACCOUNTING OFFICER OF OFFICE OF TRAFFIC SAFETY	9. SAM INFORMATION
NAME: Carolyn Vu ADDRESS: 2208 Kausen Drive, Suite 300 Elk Grove, CA 95758	SAM #: J2JJNJAU6E26 REGISTERED ADDRESS: 37101 Newark Blvd. CITY: Newark ZIP+4: 94560-3727

10. PROJECTED EXPENDITURES

FUND	CFDA	ITEM/APPROPRIATION	F.Y.	CHAPTER	STATUTE	PROJECTED EXPENDITURES
164AL-23	20.608	0521-0890-101	2022	22/22	BA/22	$60,000.00
402PT-23	20.600	0521-0890-101	2022	22/22	BA/22	$40,000.00
				AGREEMENT TOTAL		**$100,000.00**

I CERTIFY upon my own personal knowledge that the budgeted funds for the current budget year are available for the period and purpose of the expenditure stated above.	AMOUNT ENCUMBERED BY THIS DOCUMENT **$100,000.00** PRIOR AMOUNT ENCUMBERED FOR THIS AGREEMENT **$ 0.00**
OTS ACCOUNTING OFFICER'S SIGNATURE / DATE SIGNED	TOTAL AMOUNT ENCUMBERED TO DATE **$100,000.00**

1. PROBLEM STATEMENT

The City of Newark located in southern Alameda County has over 47,500 people in an area of 13.9 square miles. Newark is bordered by one major freeway and one state highway with Interstate 880 along the eastern border and State Route 84 along the northern border. The City of Newark also has several rail transportation lines serving the city, including the Altamont Commuter Express (A.C.E.) and Amtrak. These significant thoroughfares contribute to higher traffic volume within the city limits, especially during commute hours.

Over the last couple of years, Newark has developed at least 2,500 new homes and has been reported as one of the fastest-growing cities in the State of California. Naturally, the increase in new housing developments also increases the volume of vehicular and pedestrian traffic. In 2016 the population was 44,767 and reached 45,422 in 2017. In 2018 that number jumped to 47,531. The U.S. Census projects the Newark population to reach 52,500 in 2020. The announcement of the 2020 census numbers is due to be released in late 2022. The substantial population growth has impacted vehicular and pedestrian crashes. Despite concerted efforts, between 2020 and 2021, the City of Newark saw little change in fatal crash statistics. During this last year, the City of Newark saw a 9 % increase in total crashes and a 28% increase in the number of people injured than in 2020. This may be attributed to the turmoil caused by the COVID-19 pandemic, which has unexpectedly affected so many people in so many ways. On a positive note, Newark has seen a 16% decrease in alcohol-related incidents.

With companies such as Facebook and Apple offering their employees financial incentives to live within a certain distance of their campus, the City of Newark expects to see a rise in traffic-related issues as locations provide access to both sides of the bay, and the competitive housing prices make it an attractive place for employees to live. The increase of residents has added to the number of vehicles and pedestrians on local roadways and sidewalks. It has been observed that the number of vehicles that use the City of Newark's main thoroughfares to bypass the gridlocked traffic on Interstate 880 and State Route 84 during the commute hours on weekdays and weeknights.

Despite pandemic conditions, Newark has seen an increase in manufacturing and distribution companies. Newark is a centralized location within the Bay Area makes Newark a choice location for companies such as Amazon and Tesla, which have built distribution hubs in Newark. As a result, There has been a steady increase in commuter traffic and commercial delivery traffic.

The emphasis on traffic safety continues to be the main priority for the community and the Newark Police Department. To address growing traffic-related concerns, the Newark Police Department established an overarching goal to reduce the number of injury crashes and promote a safer vehicle and pedestrian environment through enforcement, education, and evaluation. In this continuing commitment, the City of Newark and the Police Department have joined a regional Tri-City Safety Responders Group, which is focused on promoting safer commuting within this region. The City also partnered with Fehr and Peers, a transportation planning and engineering firm, and community stakeholders to start the process of creating a comprehensive roadway safety plan to address traffic safety concerns.

Over the last several years, the Newark Police Department has hired an unprecedented number of officers. Approximately half of the patrol staff consists of officers with 3 years or less experience. While it was anticipated that the NPD would be fully staffed by mid/end of 2019, hiring difficulties persist and seem to be a nationwide epidemic. Although reaching full staffing is still a moving target, NPD continues to seek candidates from all areas of the community including college campuses, community groups, academies near and far, and other police organizations. Although slow, explorers are utilizized and school programs funnels good candidates into civilian positions in hopes of molding them into Newark Police Officers. Chief Anderson has made it clear to staff that traffic enforcement is one of her priorities and has directed all new officers to receive training in traffic enforcement during their initial Field Training Program. Traffic-related issues are the most common complaints from the community.

It is firmly believed that there is a direct correlation between the number of traffic citations issued and the number of traffic crashes within the city. The Newark Police Department fully expects that traffic crash numbers will continue to increase in 2022 as the vaccine is distributed and people start returning to work and learn to work within the pandemic. It is also expected that enforcement numbers to also increase in 2022 as it becomes safer to conduct proactive work and the implementation of the e-citation program. However, enforcement must be buffered by education.

The Department continues to focus on high-visibility enforcement, with much effort concentrated on pedestrian/bicycle violations, persons driving under the influence, and other identified primary crash factors. NPD will continue to analyze the most common primary crash factors for high-visibility enforcement operations.

NPD will continue enforcement and education efforts towards pedestrian and bicycle safety. The City of Newark is home to one high school, a continuation school, and a full-time Junior College campus, servicing thousands of students. Newark also hosts an annual four-day carnival and community fair that boasts an overall attendance of more than 100,000 people. NPD would like to continue focusing traffic education efforts on these dense population groups.

The number one complaint from the community is traffic-related issues. NPD receives requests for additional traffic enforcement daily. The most common allegations are speeding vehicles, stop sign violations in residential areas, and "sideshow" activities in industrial sectors. The Newark Police Department will be utilizing resources to decrease the overall number of traffic-related complaints. Identified specific areas such as: speed, impaired driving, and pedestrian/bicycle safety as areas that need immediate enforcement and education. The Department will be purchasing in-car moving radar speed devices for officers to use while on shift in speed-prone areas. These devices, which can be run continuously during the officer's shift, can easily alert an officer to a speeding vehicle as he/she drives through these areas either on routine patrol or while in route to a call for service.

The overall impact of injury crashes affects the entire population of Newark. Emphasis on education, enforcement, and evaluation will create a safer vehicle and pedestrian environment on local roadways.

2. PERFORMANCE MEASURES

A. Goals:

1. Reduce the number of persons killed in traffic crashes.
2. Reduce the number of persons injured in traffic crashes.
3. Reduce the number of pedestrians killed in traffic crashes.
4. Reduce the number of pedestrians injured in traffic crashes.
5. Reduce the number of bicyclists killed in traffic crashes.
6. Reduce the number of bicyclists injured in traffic crashes.
7. Reduce the number of persons killed in alcohol-involved crashes.
8. Reduce the number of persons injured in alcohol-involved crashes.
9. Reduce the number of persons killed in drug-involved crashes.
10. Reduce the number of persons injured in drug-involved crashes.
11. Reduce the number of persons killed in alcohol/drug combo-involved crashes.
12. Reduce the number of persons injured in alcohol/drug combo-involved crashes.
13. Reduce the number of motorcyclists killed in traffic crashes.
14. Reduce the number of motorcyclists injured in traffic crashes.
15. Reduce hit & run fatal crashes.
16. Reduce hit & run injury crashes.
17. Reduce nighttime (2100 - 0259 hours) fatal crashes.
18. Reduce nighttime (2100 - 0259 hours) injury crashes.

B. Objectives:	Target Number
1. Issue a press release announcing the kick-off of the grant by November 15. The kick-off press releases and media advisories, alerts, and materials must be emailed to the OTS Public Information Officer at pio@ots.ca.gov, and copied to your OTS Coordinator, for approval 14 days prior to the issuance date of the release.	1

2. Participate and report data (as required) in the following campaigns; Quarter 1: National Walk to School Day, National Teen Driver Safety Week, NHTSA Winter Mobilization; Quarter 3: National Distracted Driving Awareness Month, National Motorcycle Safety Month, National Bicycle Safety Month, National Click it or Ticket Mobilization; Quarter 4: NHTSA Summer Mobilization, National Child Passenger Safety Week, and California's Pedestrian Safety Month.	10
3. Develop (by December 31) and/or maintain a "DUI BOLO" program to notify patrol and traffic officers to be on the lookout for identified repeat DUI offenders with a suspended or revoked license as a result of DUI convictions. Updated DUI BOLOs should be distributed to patrol and traffic officers monthly.	12
4. Send law enforcement personnel to the NHTSA Standardized Field Sobriety Testing (SFST) (minimum 16 hours) POST-certified training.	2
5. Send law enforcement personnel to the NHTSA Advanced Roadside Impaired Driving Enforcement (ARIDE) 16 hour POST-certified training.	2
6. Conduct DUI/DL Checkpoints. A minimum of 1 checkpoint should be conducted during the NHTSA Winter Mobilization and 1 during the Summer Mobilization. To enhance the overall deterrent effect and promote high visibility, it is recommended the grantee issue an advance press release and conduct social media activity for each checkpoint. For combination DUI/DL checkpoints, departments should issue press releases that mention DL's will be checked at the DUI/DL checkpoint. Signs for DUI/DL checkpoints should read "DUI/Driver's License Checkpoint Ahead." OTS does not fund or support independent DL checkpoints. Only on an exception basis and with OTS pre-approval will OTS fund checkpoints that begin prior to 1800 hours. When possible, DUI/DL Checkpoint screeners should be DRE- or ARIDE-trained.	2
7. Conduct DUI Saturation Patrol operation(s).	8
8. Conduct Warrant Service operation(s) targeting multiple DUI offenders who fail to appear in court.	1
9. Conduct Traffic Enforcement operation(s), including but not limited to, primary crash factor violations.	5
10. Conduct highly publicized Distracted Driving enforcement operation(s) targeting drivers using hand held cell phones and texting.	2
11. Conduct highly publicized pedestrian and/or bicycle enforcement operation(s) in areas or during events with a high number of pedestrian and/or bicycle crashes resulting from violations made by pedestrians, bicyclists, and drivers.	3
12. Conduct Traffic Safety educational presentation(s) with an effort to reach community members. Note: Presentation(s) may include topics such as distracted driving, DUI, speed, bicycle and pedestrian safety, seat belts and child passenger safety.	1
13. Participate in highly visible collaborative DUI Enforcement operations.	2
14. Participate in highly visible collaborative Traffic Enforcement operations.	1
15. Send law enforcement personnel to DUI Checkpoint Planning and Management training.	1
16. Conduct specialized enforcement operations focusing specifically on street racing and sideshow activities.	2

3. METHOD OF PROCEDURE

A. <u>Phase 1 – Program Preparation</u> (1st Quarter of Grant Year)

- The department will develop operational plans to implement the "best practice" strategies outlined in the objectives section.
- All training needed to implement the program should be conducted this quarter.
- All grant related purchases needed to implement the program should be made this quarter.
- In order to develop/maintain the "DUI BOLOs," research will be conducted to identify the "worst of the worst" repeat DUI offenders with a suspended or revoked license as a result of DUI convictions. The Hot Sheets may include the driver's name, last known address, DOB, description, current license status, and the number of times suspended or revoked for DUI. DUI BOLOs should be updated and distributed to traffic and patrol officers at least monthly.

- Implementation of the STEP grant activities will be accomplished by deploying personnel at high crash locations.

- Media RequirementsIssue a press release approved by the OTS PIO announcing the kick-off of the grant by November 15, but no sooner than October 1. The kick-off release must be approved by the OTS PIO and only distributed after the grant is fully signed and executed. If you are unable to meet the November 15 deadline to issue a kick-off press release, communicate reasons to your OTS coordinator and OTS PIO.

B. Phase 2 – Program Operations (Throughout Grant Year)

- The department will work to create media opportunities throughout the grant period to call attention to the innovative program strategies and outcomes.

Media Requirements

The following requirements are for all grant-related activities:

- Send all media advisories, alerts, videos, graphics, artwork, posters, radio/PSA/video scripts, storyboards, digital and/or print educational materials for grant-related activities to the OTS PIO at pio@ots.ca.gov for approval and copy your OTS coordinator. Optimum lead time would be 7 days before the scheduled release but at least 3 business days prior to the scheduled release date for review and approval is appreciated.
- The OTS PIO is responsible for the approval of the design and content of materials. The agency understands OTS PIO approval is not authorizing approval of budget expenditure or cost. Any cost approvals must come from the Coordinator.
- Pre-approval is not required when using any OTS-supplied template for media advisories, press releases, social media graphics, videos or posts, or any other OTS-supplied educational material. However, copy the OTS PIO at pio@ots.ca.gov and your OTS coordinator when any material is distributed to the media and public, such as a press release, educational material, or link to social media post. The OTS-supplied kick-off press release templates and any kickoff press releases are an exception to this policy and require prior approval before distribution to the media and public.
- If an OTS-supplied template, educational material, social media graphic, post or video is substantially changed, the changes shall be sent to the OTS PIO at pio@ots.ca.gov for approval and copy to your OTS Coordinator. Optimum lead time would be 7 days prior to the scheduled release date, but at least 3 business days prior to the scheduled release date for review and approval is appreciated.
- Press releases, social media posts and alerts on platforms such as NextDoor and Nixle reporting immediate and time-sensitive grant activities (e.g. enforcement operations, day of event highlights or announcements, event invites) are exempt from the OTS PIO approval process. The OTS PIO and your Coordinator should still be notified when the grant-related activity is happening (e.g. car seat checks, bicycle rodeos, community presentations, DUI checkpoints, etc.).
- Enforcement activities such as warrant and probation sweeps, court stings, etc. that are embargoed or could impact operations by publicizing in advance are exempt from the PIO approval process. However, announcements and results of activities should still be copied to the OTS PIO at pio@ots.ca.gov and your Coordinator with embargoed date and time or with "INTERNAL ONLY: DO NOT RELEASE" message in subject line of email.
- Any earned or paid media campaigns for TV, radio, digital or social media that are part of a specific grant objective, using OTS grant funds, or designed and developed using contractual services by a subgrantee, requires prior approval. Please send to the OTS PIO at pio@ots.ca.gov for approval and copy your grant coordinator at least 3 business days prior to the scheduled release date.
- Social media posts highlighting state or national traffic safety campaigns (Distracted Driving Month, Motorcycle Safety Awareness Month, etc.), enforcement operations (DUI checkpoints, etc.), or any other grant-related activity such as Bicycle rodeos, presentations, or events, are highly encouraged but do not require prior approval.
- Submit a draft or rough-cut of all digital, printed, recorded or video material (brochures, posters, scripts, artwork, trailer graphics, digital graphics, social posts connected to an earned or paid

media campaign grant objective) to the OTS PIO at pio@ots.ca.gov and copy your OTS Coordinator for approval prior to the production or duplication.

- Use the following standard language in all press, media, and printed materials, space permitting: Funding for this program was provided by a grant from the California Office of Traffic Safety, through the National Highway Traffic Safety Administration.
- Space permitting, include the OTS logo on all grant-funded print materials, graphics and paid or earned social media campaign grant objective; consult your OTS Coordinator for specifics, format-appropriate logos, or if space does not permit the use of the OTS logo.
- Email the OTS PIO at pio@ots.ca.gov and copy your OTS Coordinator at least 21 days in advance, or when first confirmed, a short description of any significant grant-related traffic safety event or program, particularly events that are highly publicized beforehand with anticipated media coverage so OTS has sufficient notice to arrange for attendance and/or participation in the event. If unable to attend, email the OTS PIO and coordinator brief highlights and/or results, including any media coverage (broadcast, digital, print) of event within 7 days following significant grant-related event or program. Media and program highlights are to be reflected in QPRs.
- Any press releases, work plans, scripts, storyboards, artwork, graphics, videos or any educational or informational materials that received PIO approval in a prior grant year needs to be resubmitted for approval in the current grant year.
- Contact the OTS PIO or your OTS Coordinator for consultation when changes from any of the above requirements might be warranted.

C. Phase 3 – Data Collection & Reporting (Throughout Grant Year)

1. Prepare and submit invoice claims (due January 30, April 30, July 30, and October 30)
2. Prepare and submit Quarterly Performance Reports (QPR) (due January 30, April 30, July 30, and October 30)

- Collect and report quarterly, appropriate data that supports the progress of goals and objectives.
- Provide a brief list of activity conducted, procurement of grant-funded items, and significant media activities. Include status of grant-funded personnel, status of contracts, challenges, or special accomplishments.
- Provide a brief summary of quarterly accomplishments and explanations for objectives not completed or plans for upcoming activities.
- Collect, analyze and report statistical data relating to the grant goals and objectives.

4. METHOD OF EVALUATION

Using the data compiled during the grant, the Grant Director will complete the "Final Evaluation" section in the fourth/final Quarterly Performance Report (QPR). The Final Evaluation should provide a brief summary of the grant's accomplishments, challenges and significant activities. This narrative should also include whether goals and objectives were met, exceeded, or an explanation of why objectives were not completed.

5. ADMINISTRATIVE SUPPORT

This program has full administrative support, and every effort will be made to continue the grant activities after grant conclusion.

FUND NUMBER	CATALOG NUMBER (CFDA)	FUND DESCRIPTION	TOTAL AMOUNT
164AL-23	20.608	Minimum Penalties for Repeat Offenders for Driving While Intoxicated	$60,000.00
402PT-23	20.600	State and Community Highway Safety	$40,000.00

COST CATEGORY	FUND NUMBER	UNIT COST OR RATE	UNITS	TOTAL COST TO GRANT
A. PERSONNEL COSTS				
Straight Time				$0.00
Overtime				
DUI/DL Checkpoints	164AL-23	$10,357.41	2	$20,715.00
DUI Saturation Patrols	164AL-23	$2,932.03	8	$23,456.00
Warrant Service Operations	164AL-23	$2,367.05	1	$2,367.00
Collaborative DUI Enforcement	164AL-23	$2,606.77	2	$5,214.00
Benefits AL @ 1.45%	164AL-23	$51,751.65	1	$750.00
Traffic Enforcement	402PT-23	$1,883.26	5	$9,416.00
Distracted Driving	402PT-23	$1,501.73	2	$3,003.00
Pedestrian and Bicycle Enforcement	402PT-23	$2,937.09	3	$8,811.00
Traffic Safety Education	402PT-23	$1,501.73	1	$1,502.00
Collaborative Traffic Enforcement	402PT-23	$3,909.38	1	$3,909.00
Street Racing and Sideshow Enforcement Operations	402PT-23	$1,883.26	2	$3,767.00
Benefit PT @ 1.45%	402PT-23	$30,408.66	1	$441.00
Category Sub-Total				$83,351.00
B. TRAVEL EXPENSES				
In State Travel	402PT-23	$4,151.00	1	$4,151.00
				$0.00
Category Sub-Total				$4,151.00
C. CONTRACTUAL SERVICES				
				$0.00
Category Sub-Total				$0.00
D. EQUIPMENT				
				$0.00
Category Sub-Total				$0.00
E. OTHER DIRECT COSTS				
DUI Checkpoint Supplies	164AL-23	$3,498.00	1	$3,498.00
Portable Light Tower	164AL-23	$4,000.00	1	$4,000.00
Radar Device	402PT-23	$2,500.00	2	$5,000.00
Category Sub-Total				$12,498.00
F. INDIRECT COSTS				
				$0.00
Category Sub-Total				$0.00

GRANT TOTAL	**$100,000.00**

BUDGET NARRATIVE
PERSONNEL COSTS
DUI/DL Checkpoints - Overtime for grant funded law enforcement operations conducted by appropriate department personnel.
DUI Saturation Patrols - Overtime for grant funded law enforcement operations conducted by appropriate department personnel.
Warrant Service Operations - Overtime for grant funded law enforcement operations conducted by appropriate department personnel.
Collaborative DUI Enforcement - Overtime for grant funded Collaborative DUI Enforcement operations conducted by appropriate department personnel
Benefits AL @ 1.45% - Total Benefits 1.45% Medicare
Traffic Enforcement - Overtime for grant funded law enforcement operations conducted by appropriate department personnel.
Distracted Driving - Overtime for grant funded law enforcement operations conducted by appropriate department personnel.
Pedestrian and Bicycle Enforcement - Overtime for grant funded law enforcement operations conducted by appropriate department personnel.
Traffic Safety Education - Overtime for grant funded traffic safety presentations or campaigns conducted by appropriate department personnel.
Collaborative Traffic Enforcement - Overtime for grant funded Collaborative Traffic Enforcement operations conducted by appropriate department personnel
Street Racing and Sideshow Enforcement Operations - Overtime for grant funded law enforcement operations conducted by appropriate department personnel.
Benefit PT @ 1.45% - Total Benefits 1.45% Medicare
TRAVEL EXPENSES
In State Travel - Costs are included for appropriate staff to attend conferences and training events supporting the grant goals and objectives and/or traffic safety. Local mileage for grant activities and meetings is included. Anticipated travel may include the OTS Law Enforcement Forum. All conferences, seminars or training not specifically identified in the Budget Narrative must be approved by OTS. All travel claimed must be at the agency approved rate. Per Diem may not be claimed for meals provided at conferences when registration fees are paid with OTS grant funds.
CONTRACTUAL SERVICES
-
EQUIPMENT
-
OTHER DIRECT COSTS
DUI Checkpoint Supplies - On-scene supplies needed to conduct sobriety checkpoints. Costs may include 28" traffic cones, MUTCD compliant traffic signs, MUTCD compliant high visibility vests (maximum of 10), traffic counters (maximum of 2), generator, gas for generators, lighting, reflective banners, electronic flares, PAS Device/Calibration Supplies, heater, propane for heaters, fan, anti-fatigue mats, and canopies. Additional items may be purchased if approved by OTS. The cost of food and beverages will not be reimbursed. Each item must have a unit cost of less than $5,000 (including tax and shipping).
Portable Light Tower - High intensity light on a telescoping shaft and stabilized platform to illuminate a wide area for greater visibility during night time operations. Costs may include a generator and accessories.
Radar Device - To measure the speed of motor vehicles. This device will be used for speed enforcement.
INDIRECT COSTS
-
STATEMENTS/DISCLAIMERS

Program Income default statement:
There will be no program income generated from this grant.

Enforcement Grant Quota Disclaimer:
Nothing in this “agreement” shall be interpreted as a requirement, formal or informal, that a particular law enforcement officer issue a specified or predetermined number of citations in pursuance of the goals and objectives here under.

Benefits Disclaimer:
Benefits for personnel costs can only be applied to straight time or overtime hours charged to the grant.

CERTIFICATIONS AND ASSURANCES FOR HIGHWAY SAFETY GRANTS (23 U.S.C. Chapter 4; Sec. 1906, Pub. L. 109-59, As Amended By Sec. 4011, Pub. L. 114-94)

The officials named on the grant agreement, certify by way of signature on the grant agreement signature page, that the Grantee Agency complies with all applicable Federal statutes, regulations, and directives and State rules, guidelines, policies, and laws in effect with respect to the periods for which it receives grant funding. Applicable provisions include, but are not limited to, the following:

GENERAL REQUIREMENTS

- 23 U.S.C. Chapter 4 – Highway Safety Act of 1966, as amended
- Sec. 1906, Pub. L. 109-59, as amended by Sec. 4011, Pub. L. 114-94
- 23 CFR part 1300 – Uniform Procedures for State Highway Safety Grant Programs
- 2 CFR part 200 – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards
- 2 CFR part 1201 – Department of Transportation, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards

NONDISCRIMINATION

(**applies to all subrecipients as well as States)**

The State highway safety agency will comply with all Federal statutes and implementing regulations relating to nondiscrimination ("Federal Nondiscrimination Authorities"). These include but are not limited to:

- **Title VI of the Civil Rights Act of 1964** (42 U.S.C. 2000d *et seq.,* 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin) and 49 CFR part 21;
- **The Uniform Relocation Assistance and Real Property Acquisition Policies** Act of 1970, (42 U.S.C. 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- **Federal-Aid Highway Act of 1973**, (23 U.S.C. 324 *et seq.),* **and Title IX of the Education Amendments of 1972**, as amended (20 U.S.C. 1681-1683 and 1685-1686) (prohibit discrimination on the basis of sex);
- **Section 504 of the Rehabilitation Act of 1973**, (29 U.S.C. 794 *et seq.),* as amended, (prohibits discrimination on the basis of disability) and 49 CFR part 27;
- **The Age Discrimination Act of 1975**, as amended, (42 U.S.C. 6101 *et seq.),* (prohibits discrimination on the basis of age);
- **The Civil Rights Restoration Act of 1987**, (Pub. L. 100-209), (broadens scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal aid recipients, subrecipients and contractors, whether such programs or activities are Federally-funded or not);
- **Titles II and III of the Americans with Disabilities Act** (42 U.S.C. 12131-12189) (prohibits discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing) and 49 CFR parts 37 and 38;
- **Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations** (prevents discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations); and
- **Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency** (guards against Title VI national origin discrimination/discrimination because of limited English proficiency (LEP) by ensuring that funding recipients take reasonable steps to ensure that LEP persons have meaningful access to programs (70 FR 74087-74100).

The Subgrantee-

- Will take all measures necessary to ensure that no person in the United States shall, on the grounds of race, color, national origin, disability, sex, age, limited English proficiency, or membership in any other class protected by Federal Nondiscrimination Authorities, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any of its programs or activities, so long as any portion of the program is Federally-assisted;
- Will administer the program in a manner that reasonably ensures that any of its subrecipients, contractors, subcontractors, and consultants receiving Federal financial assistance under this program will comply with all requirements of the Non- Discrimination Authorities identified in this Assurance;
- Agrees to comply (and require its subrecipients, contractors, subcontractors, and consultants to comply) with all applicable provisions of law or regulation governing US DOT's or NHTSA's access to records, accounts, documents, information, facilities, and staff, and to cooperate and comply with any program or compliance reviews, and/or complaint investigations conducted by US DOT or NHTSA under any Federal Nondiscrimination Authority;
- Acknowledges that the United States has a right to seek judicial enforcement with regard to any matter arising under these Non-Discrimination Authorities and this Assurance;
- Agrees to insert in all contracts and funding agreements with other State or private entities the following clause:
    - "During the performance of this contract/funding agreement, the contractor/funding recipient agrees—

        a. To comply with all Federal nondiscrimination laws and regulations, as may be amended from time to time;
        b. Not to participate directly or indirectly in the discrimination prohibited by any Federal non-discrimination law or regulation, as set forth in appendix B of 49 CFR part 2l and herein;
        c. To permit access to its books, records, accounts, other sources of information, and its facilities as required by the State highway safety office, US DOT or NHTSA;
        d. That, in event a contractor/funding recipient fails to comply with any nondiscrimination provisions in this contract/funding agreement, the State highway safety agency will have the right to impose such contract/agreement sanctions as it or NHTSA determine are appropriate, including but not limited to withholding payments to the contractor/funding recipient under the contract/agreement until the contractor/funding recipient complies; and/or cancelling, terminating, or suspending a contract or funding agreement, in whole or in part; and
        e. To insert this clause, including paragraphs (a) through (e), in every subcontract and subagreement and in every solicitation for a subcontract or sub-agreement, that receives Federal funds under this program.

THE DRUG-FREE WORKPLACE ACT OF 1988 (41 U,S,C, 8103)

The Subgrantee will provide a drug-free workplace by:

a. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
b. Establishing a drug-free awareness program to inform employees about:
    1. The dangers of drug abuse in the workplace;
    2. The grantee's policy of maintaining a drug-free workplace;
    3. Any available drug counseling, rehabilitation, and employee assistance programs;
    4. The penalties that may be imposed upon employees for drug violations occurring in the workplace;
    5. Making it a requirement that each employee engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
c. Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will –
    1. Abide by the terms of the statement;
    2. Notify the employer of any criminal drug statute conviction for a violation occurring in the workplace no later than five days after such conviction;
d. Notifying the agency within ten days after receiving notice under subparagraph (c)(2) from an

employee or otherwise receiving actual notice of such conviction;

e. Taking one of the following actions, within 30 days of receiving notice under subparagraph (c)(2), with respect to any employee who is so convicted –
    1. Taking appropriate personnel action against such an employee, up to and including termination;
    2. Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
f. Making a good faith effort to continue to maintain a drug-free workplace through implementation of all of the paragraphs above.

POLITICAL ACTIVITY (HATCH ACT)
(applies to all subrecipients as well as States)
The State will comply with provisions of the Hatch Act (5 U.S.C. 1501-1508), which limits the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

CERTIFICATION REGARDING FEDERAL LOBBYING
(applies to all subrecipients as well as States)
Certification for Contracts, Grants, Loans, and Cooperative Agreements

The signed certifies, to the best of his or her knowledge and belief, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement;
2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions;
3. The undersigned shall require that the language of this certification be included in the award documents for all sub-award at all tiers (including subcontracts, subgrants, and contracts under grant, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

RESTRICTION ON STATE LOBBYING
(applies to all subrecipients as well as States)
None of the funds under this program will be used for any activity specifically designed to urge or influence a State or local legislator to favor or oppose the adoption of any specific legislative proposal pending before any State or local legislative body. Such activities include both direct and indirect (e.g., "grassroots") lobbying activities, with one exception. This does not preclude a State official whose salary is supported with NHTSA funds from engaging in direct communications with State or local legislative officials, in accordance with customary State practice, even if such communications urge legislative officials to favor or oppose the adoption of a specific pending legislative proposal.

CERTIFICATION REGARDING DEBARMENT AND SUSPENSION
(applies to all subrecipients as well as States)

Instructions for Primary Tier Participant Certification (States)

1. By signing and submitting this proposal, the prospective primary tier participant is providing the certification set out below and agrees to comply with the requirements of 2 CFR parts 180 and 1200.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective primary tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary tier participant to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default or may pursue suspension or debarment.
4. The prospective primary tier participant shall provide immediate written notice to the department or agency to which this proposal is submitted if at any time the prospective primary tier participant learns its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms *covered transaction, civil judgment, debarment, suspension, ineligible, participant, person, principal, and voluntarily excluded*, as used in this clause, are defined in 2 CFR parts 180 and 1200. You may contact the department or agency to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
6. The prospective primary tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
7. The prospective primary tier participant further agrees by submitting this proposal that it will include the clause titled “Instructions for Lower Tier Participant Certification” including the "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Covered Transaction,” provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions and will require lower tier participants to comply with 2 CFR parts 180 and 1200.
8. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any prospective lower tier participants, each participant may, but is not required to, check the System for Award Management Exclusions website (https://www.sam.gov/).
9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal government, the department or agency may terminate the transaction for cause or default.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters-Primary Tier Covered Transactions

(1) The prospective primary tier participant certifies to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment

rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

(2) Where the prospective primary tier participant is unable to certify to any of the Statements in this certification, such prospective participant shall attach an explanation to this proposal.

Instructions for Lower Tier Participant Certification

1. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below and agrees to comply with the requirements of 2 CFR parts 180 and 1200.
2. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.
3. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
4. The terms *covered transaction, civil judgment, debarment, suspension, ineligible, participant, person, principal, and voluntarily excluded*, as used in this clause, are defined in 2 CFR parts 180 and 1200. You may contact the person to whom this proposal is submitted for assistance in obtaining a copy of those regulations.
5. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
6. The prospective lower tier participant further agrees by submitting this proposal that it will include the clause titled “Instructions for Lower Tier Participant Certification” including the "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions and will require lower tier participants to comply with 2 CFR parts 180 and 1200.
7. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not proposed for debarment under 48 CFR part 9, subpart 9.4, debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any prospective lower tier participants, each participant may, but is not required to, check the System for Award Management Exclusions website (https://www.sam.gov/).
8. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
9. Except for transactions authorized under paragraph 5 of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is proposed for debarment under 48 CFR part 9, subpart 9.4, suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal government, the department or agency with which this transaction originated may pursue available remedies, including suspension or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion -- Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

BUY AMERICA ACT

(applies to all subrecipients as well as States)

The State and each subrecipient will comply with the Buy America requirement (23 U.S.C. 313) when purchasing items using Federal funds. Buy America requires a State, or subrecipient, to purchase with Federal funds only steel, iron and manufactured products produced in the United States, unless the Secretary of Transportation determines that such domestically produced items would be inconsistent with the public interest, that such materials are not reasonably available and of a satisfactory quality, or that inclusion of domestic materials will increase the cost of the overall project contract by more than 25 percent. In order to use Federal funds to purchase foreign produced items, the State must submit a waiver request that provides an adequate basis and justification for approval by the Secretary of Transportation.

PROHIBITION ON USING GRANT FUNDS TO CHECK FOR HELMET USAGE

(applies to all subrecipients as well as States)

The State and each subrecipient will not use 23 U.S.C. Chapter 4 grant funds for programs to check helmet usage or to create checkpoints that specifically target motorcyclists.

POLICY ON SEAT BELT USE

In accordance with Executive Order 13043, Increasing Seat Belt Use in the United States, dated April 16, 1997, the Grantee is encouraged to adopt and enforce on-the-job seat belt use policies and programs for its employees when operating company-owned, rented, or personally-owned vehicles. The National Highway Traffic Safety Administration (NHTSA) is responsible for providing leadership and guidance in support of this Presidential initiative. For information and resources on traffic safety programs and policies for employers, please contact the Network of Employers for Traffic Safety (NETS), a public-private partnership dedicated to improving the traffic safety practices of employers and employees. You can download information on seat belt programs, costs of motor vehicle crashes to employers, and other traffic safety initiatives at www.trafficsafety.org. The NHTSA website (www.nhtsa.gov) also provides information on statistics, campaigns, and program evaluations and references.

POLICY ON BANNING TEXT MESSAGING WHILE DRIVING

In accordance with Executive Order 13513, Federal Leadership On Reducing Text Messaging While Driving, and DOT Order 3902.10, Text Messaging While Driving, States are encouraged to adopt and enforce workplace safety policies to decrease crashes caused by distracted driving, including policies to ban text messaging while driving company-owned or rented vehicles, Government-owned, leased or rented vehicles, or privately-owned vehicles when on official Government business or when performing any work on or behalf of the Government. States are also encouraged to conduct workplace safety initiatives in a manner commensurate with the size of the business, such as establishment of new rules and programs or re-evaluation of existing programs to prohibit text messaging while driving, and education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

STAFF REPORT

Item E. 1.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Art Interiano, Deputy Community Development Director
SUBJECT	Public hearing to consider (1) adoption of a resolution approving the following: an Amendment to the General Plan, an Amendment to the Bayside Newark Specific Plan, a Vesting Tentative Map, a Design Review, a Minor Use Permit, a Density Bonus Incentive, an Addendum to EIR (SC#2010042012), a Transit Station Dedication Agreement, an Alternate Means of Compliance to Payment of Housing Impact Fees, and Grand Park Agreement Amendment; and (2) introduction of an ordinance amending the Zoning Map; for approval of the FMC Willow and Grand Park project consisting of 279 residential units, 3,600 square feet of retail, 91 affordable housing units, and a 1,485 square foot community building [APN's 537-0852-001-02 (portion), 537-0852-001-07 (portion), 537-0852-002-08 & 092-0100-005].

SUMMARY AND RECOMMENDATION

Willow Project Owner, LLC has submitted an application to develop FMC Willow and Grand Park, a mixed-use development on the subject property which is owned by FMC Corporation, Lennar Homes, and Willow Project Owner, LLC. The proposed project would be sited on 22.1 acres located northwest of the intersection of Willow Street and Enterprise Drive within the Bayside Newark Transit Oriented Development Specific Plan (Specific Plan), formerly known as the Dumbarton Transit Oriented Development Specific Plan. The proposed project would redevelop the vacant, former industrial site into a 279-unit multifamily community along with a mixed-use building consisting of 3,600 square feet of retail and 91 multifamily affordable units (including a manager's unit) and a 1,485 square foot community building, along with approximately 1.8 acres set aside for a future transit station (see Attachment 1 for Project Plans).

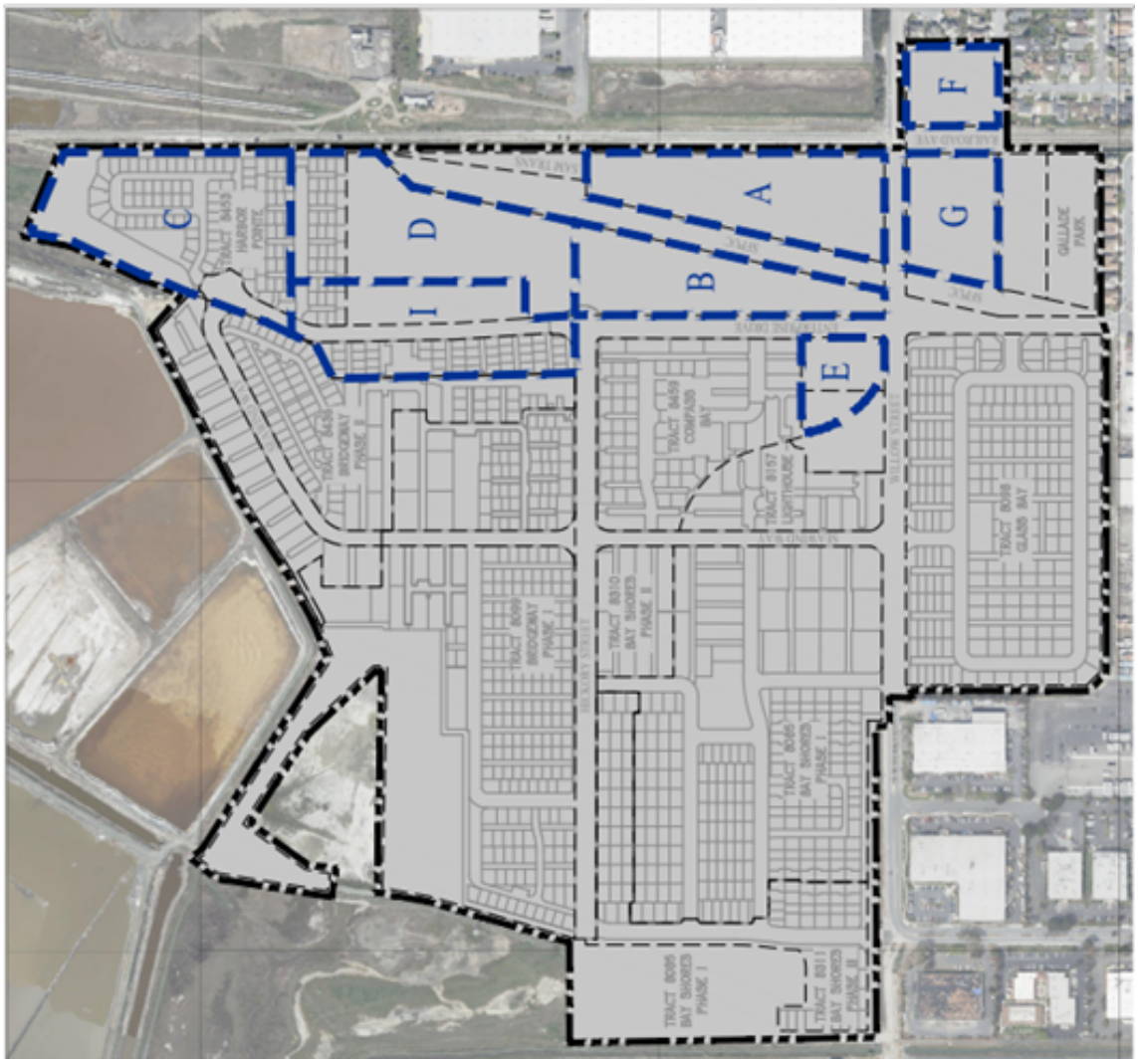
Staff recommends that the City Council: (1) adopt a resolution approving the following: an Amendment to the General Plan, an Amendment to the Bayside Newark Specific Plan, a Vesting Tentative Map, a Design Review, a Minor Use Permit, a Density Bonus Incentive, an Addendum to EIR (SC#2010042012), a Transit Station Dedication Agreement, an Alternate Means of Compliance to Payment of Housing Impact Fees, and Grand Park Agreement Amendment; and (2) waive full reading and, by title only, introduce an ordinance amending the Zoning Map; all for the FMC Willow and Grand Park project consisting of 279 residential units, 3,600 sf of retail, 91 affordable housing units and a 1,485 sf community building.

BACKGROUND

Prior Industrial Uses

The FMC Site was historically approximately 46.7 acres and geographically referenced relative to eight parcel designations, Parcels A, B, C, D, E, F, G, and I (Figure 1: FMC Site Parcel Designations).

Figure 1: FMC Site Parcel Designations



The FMC Site Parcel boundaries were based on the area operational functions of the former industrial use. The FMC's operational boundaries consisted of Parcels A and D, and the eastern portion of Parcel B. These parcels were on the easternmost edge of the FMC site and occupied approximately 16 acres. The FMC Site was bordered by Union Pacific Railroad (formerly Southern Pacific) tracks to the north, the Park Redevelopment Area to the west, Enterprise Drive to the south, and Willow Street to the east. The Hetch-Hetchy pipeline right of way, owned and operated by the City and County of San Francisco Public Utility Commission (SFPUC), transected the project site.

Figure 2: FMC's Operation Locations



The historical operations within the Parcel A portion of the FMC Site included a catalyst plant, a phosphoric acid plant, and a phosphate plant. Storage impoundments included the former phossy pond, steel aboveground storage tanks, and two below-grade vaults of steel-reinforced concrete for storage of elemental phosphorus (P4), constructed in the 1960s (see Figure 2: FMC's Operation Locations). On the portion of Parcel B that lies within the project area, former operational areas and storage impoundments included a portion of the former effluent (E-1) pond, a portion of the E-1 ditch, and a former hazardous waste storage area. Within these parcels, FMC Corporation and its predecessor companies conducted various chemical manufacturing activities between 1929 and 1995.

Hazardous Materials Remediation

Soil remediation on the project site began in 2002 in a small area in the northeast corner of the project site containing phosphorus impacted soils. Remediation in this area included construction of an asphalt cap (P4 Cap) over the impacted soils. Soil remediation activities continued in May 2015. Following soil removal activity and P4 cap construction, FMC Corporation submitted a Risk Management Plan (RMP) in August 2019, which was prepared by ERM-West, Inc. The RMP was developed to manage and set procedures for any unexpected threats from soil or groundwater during future site development. The RMP provides for long term protection, inspection, monitoring, and maintenance of the P4 Cap. The RMP was approved in September 2019 by the California State Water Resources Control Board (SWRCB). In November and December 2019, the P4 Cap was upgraded to reinforced concrete. Remediation of soils on the remainder of the project site was completed between August 2019 and November 2019, in which all excavated areas were backfilled with approved clean imported material to grades specified in approved workplans. A letter from the Regional Water Quality Control Board (RWQCB) dated November 27, 2019, stated that concentrations of chemicals in soils at the Willow Parcel soils had reached acceptable risk based cleanup levels and no further remedial action was necessary on-site.

Bayside Transit Oriented Development Specific Plan

The Bayside Transit Oriented Development Specific Plan was adopted by the City of Newark in 2010. The Specific Plan was adopted by the City as a mechanism to support and control development within the 200-acre Specific Plan area, ensuring that a comprehensive development was adopted to

encourage the creation of a livable community designed for compatible neighborhoods with connectivity to parks, open space, the future transit station, and commercial services. The Specific Plan contained a land use map that described the various uses and their locations within the Specific Plan area (see Attachment 2).

The Specific Plan included a Neighborhood Center plan area with an entrance located along Enterprise Drive. It was designed to create a high level of pedestrian and transit activity that established the core of the Specific Plan. This Neighborhood Center included the transit station, which served as the focal point for the Specific Plan area. The transit station would provide a fixed platform for transit access with parking for transit riders located in designated parking areas adjacent to and to the west of the platform.

The eastern side of the Neighborhood Center was designated for a variety of uses, including uses such as a grocery store, personal services, neighborhood services, retail, entertainment, and sports and recreation uses. Transit station access to anticipated future regional transit was of utmost importance. An area west of the Neighborhood Center was designated to accommodate up to 195,000 square feet of office and retail uses.

The Specific Plan had originally anticipated a total of 2,500 residential units, with a mix of residential land uses including Low Density Residential, Medium Density Residential, Medium High Density Residential, and High Density Residential, 35,000 square feet of retail/commercial, 195,000 square feet of general office and a 5-acre park. Currently, there are 1,828 units built or under construction, with 7 parcels (including the proposed project's 3 parcels) remaining undeveloped.

DISCUSSION/ANALYSIS

The applicant proposes to construct 279 multifamily units, a mixed-use building with 3,600 square feet of retail on the bottom floor and 90 affordable units and a manager's unit, a 1.8-acre site for a future transit station, a 1,485 square foot community building, and revise the 5-acre Grand Park (see Attachment 1 for Project Plans). In order to more easily explain the various project details, staff has described the project through geographical areas such as the North, South and Grand Park sites.

Figure 3: FMC Willow and Grand Park Site Plan



In order to evaluate the proposed project, specifically the elimination of office land use and reduction in retail uses, the City requested a Land Use Feasibility Analysis. The study would evaluate the implementation of the Bayside Commuter Rail Station, the market for office development, the market for retail based on population growth, and whether a reduction in housing density would be justified. The study was finalized on February 12, 2021, and concluded that the site is not well suited for office development due to its interior location, relatively poor freeway location and arterial road access. It also concluded that a reduction in neighborhood retail uses would not hinder the development of the transit station as the area could only expect to support approximately 4,000-12,000 square feet of retail in the next two decades based on projected housing estimates. The study found that a reduction in density was supported by the market at the time of the study.

The City Council and Planning Commission held a joint study session on February 25, 2021, to analyze the proposed project, recommendations of the land use feasibility analysis and alternate land use options. The Council and Commission had no objections to land use analysis recommendations. At the meeting, Council and Commission thought some retail near Willow Street was warranted but not as much as was originally planned in the Specific Plan. They also wanted recreational areas in place of the future transit station in the short term, such as green space and some courts for sports activities. They placed a large emphasis on the need for affordable housing and wanted to see some actual units be built with this project. There was some discussion regarding the need for public transportation and the need for a transit station in the area.

Community Meeting
The applicant also hosted a virtual townhall meeting on January 20, 2022, to receive input from the community on the project. The meeting notices were mailed to all properties within 1,000 feet of the project site. Approximately 15 people attended the meeting. A few people spoke and asked some clarifying questions about the future project and Grand Park. Besides general comments, there were no significant issues or any objections raised at the meeting.

North Site
The north site would contain the 91-unit affordable housing, mixed-use building, 64 multifamily units and the future transit station parcel. The 64 market-rate units would be townhomes. The townhomes models would have five floorplans ranging from 1,696 square feet to 2,015 square feet, and the buildings would be three-stories high. The architectural style of the buildings would be consistent with the Specific Plan and would be considered "Agrarian Contemporary". Agrarian Contemporary styles are strongly influenced by homes of pre-railroad America. The style relies on simple form based architecture with strong roof lines and inviting front porches. These homes should not be overly adorned with decoration and attention should be paid to appropriately proportioned fenestration patterns that provide a specific rhythm to the facade of the buildings. The proposed homes would include a very clean and crisp look, with a light color palette, strong roof lines, and a simple form. The style would be similar to other surrounding residential developments in the area. The contemporary flat and low-slope roofs would give the homes a subtle unique character to differentiate and add visual interest. The buildings would include horizontal lap siding and stucco finishes with additional material like stone veneer and brick for articulation. There would be minimal door and window trim detailing and a light color palette. The buildings would include a variety of wall depth variation to give each unit its own look instead of a repeated style throughout each building. The units would include private balconies and window awnings to allow for additional variation.

The North Site would be accessible directly from one access point along Willow Street. A two-lane entrance road and system of interior roads and courts would provide vehicular access and circulation throughout the proposed development, and once the transit station is constructed, the two-lane road would be transformed into a four-lane road.

Sidewalks would be provided along the Enterprise Drive and Willow Street frontages. A system of sidewalks would be provided throughout the project and each unit would have direct access to a short walking path that would connect to the internal sidewalk system. The project would include walkways and crosswalks that would lead to the transit station via Enterprise Drive and Willow Street and connect to off-site sidewalks along the south side of Enterprise Drive. There would also be a small community park located north of the Hetch Hetchy parcel with a BBQ area, small recreational facilities, and seating for community, which would help serve the immediate area.

Transit Station
The Specific Plan had envisioned a transit station as part of the area that would serve the greater region as well as neighboring residents. The transit station would be the focal point for the Specific Plan area and serve as a gathering space for the community. It would provide a fixed platform for transit access with parking for transit riders located in designated parking areas adjacent to and west of the platform.

The overall goal of the Specific Plan was to create a vibrant Neighborhood Center and transit area framed by storefronts and landscaping and provide a mix of uses within the Specific Plan area to create a pedestrian friendly atmosphere. Keeping these goals in mind, staff worked with the San Mateo County Transit District (SamTrans) and Kimley Horn to determine the appropriate size, location and access of a future transit station. The Station Area Planning Memo (see Attachment 3) determined that 1.1 acres was the minimum area needed for adequate facilities based on assumed ridership levels. This project will provide 1.8 acres which would allow for the construction of the surrounding roads and circulation for a transit station in the future and include all necessary amenities and parking. The future transit station design could include a parking structure, surface parking, a pedestrian plaza, a station plaza, a station building, and a station platform. The future design also would incorporate bicycle circulation, pedestrian circulation, a bus turnaround and drop off area and pedestrian drop off. The bus turnaround and drop off area would be located north of 'G' Street and within the Transit Station area to allow for bus transit services. The potential design would incorporate all of the elements envisioned in the Specific Plan and allow for ample circulation throughout the site for pedestrians, bicyclists, motorists, and buses.

Currently, SamTrans is still working with its regional partners to determine how the Dumbarton Rail Corridor Project will be funded so it can move forward. It is listed in Plan Bay Area 2050 in its 2036–2050-time horizon for implementation, and SamTrans is coordinating with the Metropolitan Transportation Commission to decide how the development will move forward.

South Site

The South Site of the project would include a 1,485 square foot community building, 215 townhomes. The townhomes would consist of 123 Split, and 92 Towns models. The Stacks would have 5 floorplans ranging from 1,696 square feet to 2,015 square feet. The Splits models would have a standard option with five 3-story floorplans ranging from 1,307 square feet to 2,108 square feet and two 4-story floorplans featuring 2,371 and 2,422 square feet.

Similar to the North Site, the units would be developed with an Agrarian Contemporary architectural style, per the Specific Plan, and match the surrounding residential units. The units would consist of simple architecture and have a very clean look. The units would include a lighter color palette and have variation in materials including stucco, lap siding, brick, stone veneer, etc. The roof tops would be flat or include very low slopes. The buildings would also include balconies adding some visual depth along with a variation in wall planes. The units would provide a very modern look for the development.

The South Site would be accessible directly from two access points along Enterprise Drive. The proposed project would include the extension of Hickory Street north of Enterprise Drive to access units in the southern portion of the project site. Although it was discussed early in the project concept, no roads, bridges, or paths would be constructed to cross the Hetch Hetchy right-of-way. SFPUC determined that no crossings across Hetch Hetchy were allowed due to a conflict with their future operations and maintenance. One additional access point would be constructed along Enterprise Drive to allow direct access from Enterprise Drive to the proposed Grand Park. It would include a network of alleyways and sidewalks for circulation throughout the site. The clubhouse would be located on the western portion of the residential area, adjacent to the Grand Park. There would also be a small community park located south of the Hetch Hetchy parcel with small recreational amenities and seating, which would help serve the immediate area.

Grand Park Agreement Amendment

The applicant has also submitted a request to reconfigure the previously approved 5-acre Grand Park (see Attachment 8, Exhibit 5). The site is located on the western portion of the proposed project and would be bordered by homes on the east and the Hetch Hetchy parcel on the northeastern corner. The Grand Park was previously approved along with the Harbor Pointe project on January 24, 2019. The size of the Grand Park would remain the same, but the proposed boundary would be adjusted as part of the proposed project, and it would incorporate additional land on the eastern boundary that is designated as commercial/office by the Specific Plan and is currently zoned as Business and

Technology Park (BTP) by the City. The land to the northeast would be reduced in size and would be designated as Parks and Open Space in the Specific Plan and zoned Park by the City. Therefore, the areas of the Grand Park site that are currently zoned for BTP would be rezoned to allow for parks and recreational open space use. This is discussed in detail below under the Zoning Map Amendment section. The change in the park boundary was requested due to the environmental remediation work performed by FMC. The proposed wider park would create a larger buffer between the remediation zone and the residences on the eastern side of the park. Due to the map reconfiguration, an amendment to the Park Agreement has been requested. The Grand Park would continue to have all previously approved amenities including dog parks, an amphitheater, a wildflower garden, open laws, and several play equipment areas. It will also include some additional amenities including an all-abilities playground, wider path for the Bay Trail, and a larger open space area for a soccer field.

The Bay Trail, which runs throughout the Specific Plan would come down through the Grand Park and include a 20 foot wide trail corridor and run along Enterprise Drive to Willow Street, containing a 12 foot wide multipurpose trail. The proposed recreational trail is anticipated to become part of the regional San Francisco Bay Trail. Pedestrians would be able to walk throughout the site with various walkways ensuring continuity. Staff worked with SFPUC to try to place the Bay Trail across the Hetch Hetchy site, but no crossing over the site was allowed. Due to this determination, a deviation from the Specific Plan was recommended to place the Bay Trail through the Grand Park.

Consistency with the Specific Plan and Zoning Ordinance
The Specific Plan had envisioned a Neighborhood Center with the transit station as the main focal point. The envisioned layout included office, commercial and high-density residential uses. Although the proposed project's uses and layout are different from the Specific Plan, the overall intent of the Specific Plan would be met with a future transit station that would include all necessary amenities. It would also include some retail and provide for mixed-use housing, including affordable units. The rest of the project would be classified as Medium Density Residential, and the overall number of units for the site would be higher than the number of units originally anticipated for these sites in the Specific Plan. Some of the applicable goals and policies from the Specific Plan are listed below:

- Create a vibrant Neighborhood and Transit Area framed by storefronts, awnings, and landscaping.
- Create an architectural character that is distinctive and memorable. Public street facing facades of all buildings should have the same level of articulation and quality of details and materials.
- Parks and open space should enhance the natural qualities of the area.
- A street network that connects with existing local and regional roadways, such as Enterprise Drive, Willow Street, and Central Avenue, and provides for efficient and safe circulation throughout the Plan area.
- Streets should meet the needs of all users including drivers, bicyclists, pedestrians, persons with disabilities, and transit users.
- The City shall continue working with the regional transit agencies to study design, funding and construction options for the Transit Station.
- Develop a Transit Station that provides access to the various modes of transit. Design the Station to include:

1. Bus pick-up and drop-off bays;
2. An area for limited short-term waiting;
3. Disabled parking areas;
4. Shuttle pick-up and drop-off areas; and,
5. Safe and attractive pedestrian and bicycle crossings to and from the Station.

The overall design of the project would be consistent with the Specific Plan and guidelines in the Zoning Ordinance. The Specific Plan envisioned a vibrant Neighborhood Center and Transit Area framed by storefronts, awnings and landscaping, which this project will provide to an extent. The design of the proposed buildings, location, setbacks, landscaping, lighting, and architectural features would meet the intent of both the Specific Plan and Zoning Ordinance. The buildings would be proportionately massed

and would fit in with the surrounding neighborhood, having a similar contemporary architectural style. The goal of the Specific Plan architecture was to create a character that is distinctive and memorable. With the mixed uses including the Transit Station, residential, and commercial, the site will be a unique and memorable area for the community. The public street facades would have additional articulation and quality of details with a variety of materials. The Grand Park, along with the other Open Space areas, would enhance the natural qualities of the area by giving the community additional amenities and open areas. The project's landscaping palette would consist of low-maintenance and drought-resistant plants, consistent with the intent of the Specific Plan. The street network would connect with Enterprise Drive and Willow Street and would provide efficient and safe circulation throughout the area, per the Specific Plan. The streets would include areas for drivers, bicyclists, and pedestrians. Bicycle parking would be provided at the Grand Park. The Bay Trail would continue the regional trail and go through the Grand Park, to the east of Enterprise Drive, and then north on Willow Street. As previously discussed, the parking would be reduced for the entire project site and would allow for the various uses to share parking. Per the Specific Plan, City staff worked extensively with SamTrans to help develop an area of 1.8 acres that would be feasible for a future transit station.

The overall project would also have landscape consistent with the Newark Zoning Ordinance throughout the project. The proposed project's landscaping palette would consist of low-maintenance, drought-resistant plants and would provide attractive year-round interest. The project proposes landscaping that would include ornamental trees, shrubs, and groundcover. The conceptual landscaping design would concentrate plantings along the perimeter of the project site, along proposed neighborhood roadways, and around the parking areas. All proposed street trees would be a minimum 24-inch size box and be provided in between every six (6) parking spaces. At least 10 percent of the parking lot area for the affordable housing and retail mixed-use site would be landscaped. The proposed project would implement Bay-Friendly landscaping practices in accordance with the City's municipal code including, but not limited to, using mulch, amending soil with compost before planting, reducing and recycling landscaping waste, planting native drought tolerant plants, minimizing lawn areas, and installing weather-based irrigation controllers.

There would be a variety of lighting levels throughout the overall project site including accent lighting and pendant lighting for added enhancement.

The project would propose a total of 6,050 square feet of open space for the affordable housing/retail site, 103,000 square feet of open space for the residential sites, and 42,780 square feet of private open space for the multifamily units.

If this project were to be approved, there would be a total of 2,198 units built in the Specific Plan with 3,600 square feet of retail/commercial, and a 5-acre park. There would be a potential for an additional 163 units to be built in the future on the 4 remaining parcels. (See Attachment 4, showing Bayside Transit Oriented Development Specific Plan Area Unit Allocation Original Specific Plan Table).

Specific Plan Amendment
The Bayside TOD Specific Plan was adopted in 2010 has had several phases of development. The developed residential communities include Bayshores, Lighthouse, Glass Bay, Newark Senior Station, Compass Bay, Bridgeway and Harbor Pointe. Although the Specific Plan has been mainly kept intact, several changes to design, layout and land uses have been required to meet the economic realities of each project. Similarly, this project is requesting changes to some aspects of the Specific Plan to meet the goals and objectives of the developer in the current market. The project maintains key elements of the Specific Plan such as providing a substantial number of market rate housing, affordable housing, retail and the transit station. The Specific Plan amendments are shown on Attachment 8, Exhibit 4.

Per Section 9.4 of the Specific Plan, adjustments to land use areas that exceed 20% of the land use's gross area require a formal Specific Plan revision. Table 1 lists the proposed changes below, which exceed 20%.

Table 1: Proposed Project Changes to Specific Plan

Land Use Category	Specific Plan Land Use (ac)	Proposed Land Use (ac)
Commercial/Office	5.60	0.0
Transit Station	2.80	2.10
Commercial/Retail	4.70	0.0
Commercial/Mixed	0.0	1.60
Medium/High Density Residential	0.0	13.35
High Density Residential	4.70	0.0
Parks and Recreation Open Space	2.60	5.05

*Please note that this table shows gross acreage for the uses.

The Specific Plan designates 4.70 acres within the project site for High Density Residential (25-60 dwelling units per acre) which would allow for a maximum of 282 dwelling units to be developed within the project site as currently designated. The proposed project would amend the Specific Plan land use designations on the project site to allow for 1.60 acres of Commercial/Mixed Use and 13.35 acres of Medium/High Density Residential (16-60 DU/acre) to allow for the development of the proposed 370-unit mixed-use community. Therefore, the proposed Specific Plan Amendment would allow up to 522 more residential dwelling units to be developed on the project site than currently allowed, and the approval of a Specific Plan Amendment would not result in a net loss of residential units planned to be developed on the project site). No net loss of residential capacity would occur as required by SB 330 (Gov. Code section 66300(i)(1). The project would propose the development of 370 dwelling units on the project site (88 more dwelling units than currently allowed on the site without the Specific Plan Amendment).

Community Finance Agreement
The project would be required to enter into a Community Finance Agreement (Attachment 5) as required by the Bayside Newark Specific Plan. The agreement requires the Developer to contribute toward the estimated costs of the anticipated TOD Project-wide improvements, including the City's planning, design, right of way acquisition and construction of the Central Avenue Railroad Overcrossing. The developer would be required to pay $2,500 per dwelling unit.

The developer would also be required to provide consent to the imposition, creation, or funding of a duly-established financing district (including but not limited to a Communities Facilities District pursuant to the Mello Act) on the Property to fund services or facilities, or shall arrange for an alternative permanent annuity to provide equivalent revenue. The maximum amount of the assessment, special tax, or annuity shall not exceed Two Hundred Twenty Dollars ($220.00) per year per market rate residential housing unit. All projects that have been approved in the Bayside Newark Specific Plan area have signed a similar Community Finance Agreement.

General Plan Amendment
The applicant has requested a General Plan Amendment of the entire project area from Community Commercial, High Density Residential, Parks and Recreational Facilities and Public Institutional to Medium Density Residential, Commercial Mixed Use, Public Institutional and Parks and Recreational Facilities (see Attachment 8, Exhibit 2). In order to be consistent with the requested entitlements listed above, and Specific Plan Amendment and Zoning Map Amendment, the applicant would need a General Plan Amendment. Please see Table 2 for a breakdown of changes:

Table 2: Proposed General Plan Amendment Changes

Land Use Category	Original Land Use (ac)	Proposed Land Use (ac)
Public Institutional	2.20	2.10
Commercial/Mixed Use	0.00	1.60
Community Commercial	12.30	0.0
Medium Density Residential	0.0	13.35
High Density Residential	5.90	0.0
Parks & Recreational Facility	1.70	5.05

*Please note that this table shows gross acreage for the Public Institutional.

The General Plan designates 5.90 acres of land within the project site for High Density Residential (25-60 dwelling units per acre) which would allow for a maximum of 354 dwelling units to be developed within the project site as currently designated. The proposed project would amend the General Plan land use designations on the project site to allow for 1.60 acres of Commercial/Mixed Use and 13.35 acres of Medium Density Residential (14-30 DU/acre) to allow for the development of the proposed 370-unit mixed-use community. Therefore, the proposed General Plan Amendment would allow for an increase of 48 residential dwelling units. Accordingly, there will be no net loss in residential units consistent with the requirements of SB 330 (Gov. Code section 66300(i)(1).

Based on the analysis and findings of determination (Attachment 8, Exhibit 7) staff recommends that the City Council approve the proposed General Plan amendments.

Zoning Map Amendment
The site is currently zoned as Business and Technology Park (BTP) and Park (PK) which allows advanced technology research and development, manufacturing, and related support facilities, along with parks in the area designated as Park. The BTP zoning districts are remnant districts from prior industrial uses before the adoption of the Bayside Newark Specific Plan. The applicant has proposed the Zoning designations listed in Table 3 below for the project.

Table 3: Proposed Zoning Designation Changes

Zoning District	Current Zoning (ac)	Proposed Zoning (ac)
Residential Medium Density with Form Based Code (RM-FBC)	0.00	13.35
Commercial Mixed Use with Form Based Code (CMU-FBC)	0.00	1.60
Business Technology Park (BTP)	17.10	0.00
Transit Station (TS)	0.00	2.10
Park (PK)	5.00	5.05

*Please note that this table shows gross acreage for the Transit Station.

There are three significant zoning changes requested. The first is due to the proposed mixed use building and contains the affordable housing units and the ground floor retail within the same building. The mixed use building provides a density of 56.88 which is consistent with allowed density ranges of 30-60 du/acre per the CMU zoning district. The mixed use zoning district was not originally included as a proposed land use in the Specific Plan, but providing the ability to have a mixed building is consistent

with the intent of the Specific Plan, including the policies encouraging affordable housing and retail uses near the transit station area. The second change is due to the proposed market-rate units which were envisioned in the Specific Plan. The overall proposed density of 20.89 dwelling units per acre on Residential Medium Density (RM) zoning district would be consistent with the allowed density ranges of 14 to 30 du/acre. Thus, the site would require a rezoning of approximately 13.35-net acres from Business and Technology Park (BTP) to Residential Medium Density with Form Based Code (RM-FBC) (see Attachment 6). The third change is due to the transit station area which was envisioned by the Specific Plan and the ultimate size of the station area was determined by the Station Area Planning Memo.

The Specific Plan had envisioned approximately 6 acres being utilized for a Transit Station. The new site would be reduced to 1.8 acres, and the project would require a rezoning of 1.8 net acres of Business Technology (BTP) to Transit Station (TS) (2.10 gross acres). Since the Hetch-Hetchy site goes through the project site, it would need to be rezoned to Public Facilities (PF). The Grand Park was previously 5 acres; however, the proposed project requests to reclassify the boundaries of the park, so a portion of the site to the east would need to be rezoned to Park and the northeastern portion currently zoned as Park would need to be rezoned to Residential Medium Density with Form Based Code.

Staff recommends that the City Council waive full reading and, by title only, introduce an ordinance amending the Zoning Map based on the analysis and findings of determination (Attachment 9, Draft Ordinance Exhibit B). If introduced, the ordinance will be brought back to the Council for second reading and approval.

Affordable Housing Mixed Use Building and Compliance Agreement
Newark's Affordable Housing Program requires that developers pay an impact fee to preserve or increase the supply of affordable housing in the city. &As an alternative to paying the impact fee, a developer may provide on-site affordable housing units per NMC 17.18.050. The developer is requesting to provide affordable units in-lieu for both the FMC Willow project and Harbor Pointe project (formerly known as FMC C Parcel approved in January 2019).

The current Housing Impact Fee rate for multi-family residential projects is $24.51 per square foot of floor area for the first 1,000 square feet and $9.82 per square foot above 1,000 square feet, per unit. Based on the proposed size and number of the residential units from both projects (Harbor Pointe & FMC Willow), the Housing Impact Fee for the 471-units would be approximately $15.7 million. As allowed per NMC 17.18.050, residential developers may provide affordable units on site as an alternative to payment of the Housing Impact Fee, at a rate described in the Housing Impact fee resolution, subject to affirmative findings in NMC 17.80.050(D).

Per Resolution 10,184 if the developer provides an appropriate mix of affordable units then the project would mitigate the impacts to affordable housing needs to the city. Based on the 471 units discussed and the size of each unit, the following Table 4 illustrates the required number of affordable units requires:

Table 4-Alternative Housing Impact fee Proposal

Required Distribution Percentage of AMI per Household	Required Units	Units Proposed
Very Low (30-50%)	44	47
Low (50-80%)	21	23
Moderate (80-120%)	19	20
Total	85	90*

* One Manager unit will be provided in addition to the affordable units.

The project will not only provide sufficient units to meet the requirements of the resolution but would exceed the amount by 5 units and meet affordability levels. Based on discussions regarding affordable housing needs in the city, staff recommended that the developer provide units more appropriately designed for a typical family. The proposed affordable units would be in a single 6-story mixed use building and provide four different types of floor plans including 42 1-bedroom, 26 2-bedroom, and 23 3-bedroom affordable units.

The mixed-use building would be located along Willow Street at the southwest corner of G Street and Willow Street. It would have retail and parking on the first floor, with residential, residential amenities, and retail on the second floor, and all residential on the third floor and higher. The 6-story building would provide a total of 3,600 sf of retail space, 90 affordable units plus 1 manager's unit affordable units on 1.60 acres. The area behind the retail would include covered parking for the units on the first level. The second level would include 15 units along with a club room, tot lot, BBQ area, yoga lawn and fitness center. Levels 3-6 would include 19 units and an open view down to the courtyard on the second floor. The building would be compatible with the surrounding area and consist of a similar architectural style to the other residential homes on the proposed project site. The building would include a light color palette with varying materials to create visual interest and include a variation in massing. With the nearby 4-story apartment (Senior Station) complex to the south of the project site, the 6-story mixed-use podium building being of similar height and mass, would reflect a similar and complimentary style with the use of scored stucco, similar window awnings, and parapet walls with roofed tower elements (see Attachment 1 for Project Plans).

USA Properties Fund would own and construct and manage the affordable units. USA Properties Fund would provide onsite management and maintenance of the building during operational hours. USA Properties Fund also manages the Newark Station Senior affordable housing site, one block South of the proposed mixed use affordable housing site.

Providing affordable units are subject to an Affordable Housing Compliance Agreement established between the City and the residential developer. To comply with requirements of NMC 17.80.050, the developer has agreed to the Affordable Housing Satisfactory and Regulatory Agreement. The Satisfaction agreement is between the City, Lennar and FMC Willow Project Owner LLC and describes the obligations and securities required by the City. The Regulatory agreement is the "standard" agreement the city requires to enforce implementation and management of the affordable units. This agreement would establish the total affordable unit count and income category distribution described in Table 5, set the deed-restriction duration (55 years), Newark local preference and various other terms. The agreement would also establish administrative and ongoing management requirements.

The proposed mixed-use project is consistent with the objectives, policies, and vision of the Bayside Transit Oriented Development Specific Plan. In addition, providing affordable units is consistent with the Newark Affordable Housing Workplan program II and requires the approval of the following action to allow the construction of proposed mixed-use project.

Staff recommends that the City Council approve the Alternative Means of Compliance to Payment of Housing Impact Fee, based on an Affordable Housing Compliance Agreement, as provided in Attachment 8, Exhibit 6, as well as the alternative affordable housing program findings contained in Attachment 8, Exhibit 7.

Transit Station Dedication Agreement
The applicant is proposing a Transit Station Dedication Agreement to provide the 1.8 acres to the City, including an easement over the P4 Cap area which would be owned by the Willow Project Owner, LLC (see Attachment 7). The dedication agreement includes an irrevocable offer of dedication offering the transit station parcel in fee and a perpetual easement over the P4 Cap area. The dedication agreement ensures sufficient property would be available for the future transit station. In the short term, the city has

requested interim improvements on the site which have minimal long-term maintenance cost. For now, the temporary improvements would consist generally of interim open space with a natural turf surface and split rail boundary fence adjacent to Willow Street and G Street, and an interim surface parking lot. The parking lot has been designed as a potential park n' ride location but permanent programming by the city will be determined at a future date. Prior to acceptance of interim conditions, staff will initiate a discussion with the Planning Commission and City Council regarding how the interim transit station parcel will be programmed. Per the dedication agreement, the transit station parcel will not be dedicated to the city until interim improvements are completed and the last market rate residential unit is completed. The dedication agreement will be executed if this project is approved.

Design Review
The applicant has requested a Design Review for the review of the entire project. The overall design of the project is consistent with the neighboring developments. The site would include 279 multifamily homes on 13.35 acres, with a density of 20.89-units to an acre, and 91 affordable units in one 6-story building on 1.60 acres with a density of 56.88-units to an acre. As previously mentioned, the site would be split into two areas by the Hetch Hetchy right-of-way corridor, the North Site and the South Site. Both areas would include buildings with the same architectural style of Agrarian Contemporary. The buildings would have a very modern look, with a light color palette, strong roof lines, and a simple form. The style would be similar to other surrounding residential developments in the area. There would be a variety of wall depth and massing to provide additional visual interest. The design and architectural style of all the buildings would be consistent with the Specific Plan and provide for a cohesive look for the development.

Staff recommends that the City Council approve the project Design Review based on the analysis and findings of determination (Attachment 8, Exhibit 7).

Minor Use Permit
The Specific Plan requires that 2.5 on- and off-street parking spaces per unit be provided for multifamily residential developments, 3 stalls per 1,000 square feet of retail for areas greater than 5,000 square feet, 1.5 spaces/1 bed and 2 spaces/2-3 bed affordable housing units. The proposed project would construct 279 multi-family residential units, requiring 698 parking spaces. The applicant has requested a Minor Use Permit to allow for reduced parking throughout the project site, in accordance with Section 17.23.050 of the Zoning Ordinance, due to the close proximity to the future transit station. The Zoning Ordinance states that the parking requirement can be reduced by 20 percent of the normally required number of spaces if a project is located close to a transit facility. Applying the MUP request, would reduce the required parking to 558 parking stalls. A parking calculation is provided below in Table 5.

Staff recommends that the City Council approve the Minor Use permit based on the analysis and findings of determination (Attachment 8, Exhibit 7).

Density Bonus Incentive
In addition to the MUP request above, the applicant has requested a Density Bonus incentive for reduced parking as an incentive for providing affordable units, pursuant to Density Bonus Law, CA Government Code Section 65905 and Section 17.19.030B of the Zoning Ordinance. The city's multifamily parking standards require 1.5 spaces/1-bedroom units and 2 spaces for 2-3 bedroom units. This would equate to 187 parking spaces being required for the affordable housing building. Since the project is providing more than 10% of units to be lower income, the State density bonus law allows the applicant one incentive. The applicant has requested that the parking standard for each affordable unit be reduced to one parking stall per unit.Due to the close proximity of the future transit station and reduced parking demands of lower income level affordable units, staff believes the reduction in parking demands can be justified.

The overall parking allocation would be adjusted per Table 5 below.Parking for the retail and affordable housing site would be located in garage on level 1 and uncovered parking would be located to the west of the mixed-use building.

Table 5: Required vs. Provided Parking

Land Use	Required Parking Spaces	Number of Required Spaces	Required with 20% Reduction (MUP) and Density Bonus	Provided Parking Spaces
Multi-Family	2.5 per unit	698	558	630
Affordable Units & Manager's Unit	1.5/1 Bed; 2/2-3 Bed	187	91	91
Retail	3/1,000 s.f. greater than 5,000 s.f.	0	0	9
Total		885	649	730

This Project qualifies for an incentive/concession due to the amount of affordable units provided. An incentive/concession is defined as a reduction in site development standards or a modification of zoning code or architectural design requirements, such as a reduction in setback or minimum square footage requirements; or approval of mixed-use zoning; or other regulatory incentives or concessions which actually result in identifiable and actual cost reductions.

Staff recommends that the City Council approve the Density Bonus incentive based on the analysis and findings of determination (Attachment 8, Exhibit 7).

Vesting Tentative Tract Map

The applicant has submitted a Vesting Tentative Tract Map 8559 to construct the 279 multi-family units, 3,600 square feet of retail area, 91 multifamily affordable units, a 1,485 square foot community building, a 5-acre community park, and 1.8 acres set aside for a future transit station (see Attachment 8, Exhibit 3). It would consist of 36 lettered parcels the following land uses: multifamily residential (9.37 acres), mixed-use/affordable (1.15 acres), water quality (0.53 acres), public right-of-way dedication (1.04 acres), private streets (3.16 acres), Grand Park (5.05 acres), and the transit station (1.80 acres). This would allow for the separation of uses and allow for different ownership of various areas. The current boundary map consists of two parcel maps (North Site and South Site) with two parcels each, including the previously approved Grand Park. The Hetch Hetchy parcel is located in the middle of the two parcel maps, and a small triangular parcel owned by SamTrans is located to the northwest of the project area.

Staff recommends that the City Council approve the Vesting Tentative Tract Map based on the analysis and findings of determination (Attachment 8, Exhibit 7).

Overall Project Recommendation

The proposed project is in line with the goals and policies of the Bayside Newark Specific Plan by proposing to create a livable mixed-use development designed with connectivity to existing and proposed developments in the neighborhood of Bayside Newark. The project's location and design would enhance the proposed residential use. As an infill development, the project would be located within walking and biking distance of public transportation, community commercial, and community amenities. The project would allow for a future transit station which was the main focal point of the Specific Plan. The residential units and mixed-use building would complement the transit station by allowing higher density housing and some neighborhood retail development to serve the community. The clubhouse for the community would be an added amenity, and the revision of the Grand Park would allow for additional amenities for the community. This is all in line with vision of the Specific Plan.

The General Plan includes several policies related to the Specific Plan being consistent with the General Plan. The re-designation of some of the project's land use designations would be necessary to

complete the vision of the Specific Plan and allow for a more up-to-date interpretation of what would be fiscally feasible for the area. It was determined that the previously envisioned office uses would not be suitable and a reduction in retail area would be more suitable for the site. That the appropriate size and placement of the future transit station would be viable. The project would result in the development of market rate and affordable housing adjacent to retail and recreational uses, allowing a balance of uses. It would increase a variety of housing opportunities for the community and provide more recreational facilities. It would also create additional neighborhood serving shopping opportunities for the community. The project would implement the Specific Plan's design guidelines and all the other Design Review standards to ensure high quality development and adequate buffering. The project would also include landscaping and lighting consistent with the Specific Plan requirements

Thus, staff recommends approval of the FMC Willow and Grand Park Amendment. A draft Resolution and Ordinance have been attached as Attachment 8 and 9.

FISCAL IMPACT

The recommended action would have no impact to the current fiscal budget. Having said that, the FMC Willow project contains a provision which requires the developer to provide property to the city through the Transit Station Dedication Agreement. The dedication of this property (1.8 acres) to the city would be for the long-term vision of establishing a train station. In the short-term, the property would have interim improvements such a parking lot and open space which will be an impact to future city budgets. Based on the construction schedule, it is expected that the transit station area with interim improvements by transitioned to the city in approximately 3-5 years.

In addition, the City will accept the Grand Park along with all improvements once the park is officially accepted per the terms of the Park Agreement. This action was already taken when the Harbor Pointe (FMC C Parcel) was approved but is being re-approved due to changes to the park boundaries as discussed in this report.

ENVIRONMENTAL/PLANNING COMMISSION REVIEW

Addendum to Program Environmental Impact Report (PEIR):
The City of Newark (City) certified a Program Environmental Impact Report (PEIR) for the Dumbarton Transit Oriented Development (TOD) Specific Plan (State Clearinghouse No. 2010042012, July 2011). The State CEQA Guidelines environmental review procedures allow for the updating and use of a previously adopted PEIR for projects that are different from the previous project or the conditions under which the project was analyzed. An Initial Study was prepared for this project, which examined the nature and extent of potentially adverse effects on the environment that could occur if the project is approved and implemented.

The proposed project would be substantially similar to the project evaluated in the adopted 2011 PEIR. Similar to the approved project, the proposed project would involve constructing medium density residential on the project site which is substantially similar to the development area analyzed in the 2011 PEIR, which involved constructing medium-high density residential. Generally, the project's increased residential density replaces existing commercial and office. The analysis contained in the Initial Study demonstrated that there are no substantial changes proposed in the project which would result in any new significant environmental effects or a substantial increase in the severity of previously identified significant effects. There would be no new information of substantial importance which was not known for the 2011 PEIR, and no new mitigation measures are necessitated by new impacts. However, the applicant would remain obligated to comply with all applicable mitigation measures and conditions of approval contained within the EIR.

The City of Newark staff reviewed the Initial Study for the Project, and based upon substantial evidence in the record, found that all potentially significant effects of the Project, as identified in the Initial Study, can and would be avoided. In accordance with State CEQA Guidelines Section 15164, an Addendum has been prepared to document that the proposed project modifications do not require preparation of a

subsequent EIR or negative declaration under Section 15162. The IS/Addendum, Appendices as well as the Mitigation Measures, Reporting Program (MMRP), and findings of determination are attached as Attachment 8, Exhibit 7 & 8.

Planning Commission Public Hearing
The Planning Commission met on July 12, 2022, to review the project. The Planning Commission had various clarifying questions regarding the project related to noise barriers, construction schedule of the Grand Park, parking requirements, and other minor items. A resident of the area provided written and verbal comments which generally focused on a greater need to provide quality parks with equally type playground equipment. As a result, staff worked with the applicant to clarify the type of quality playground equipment to be proposed through an additional condition of approval, listed as "ppppp" in the Conditions of Approval (Resolution, Attachment 1). There were no further comments from the public.

The Planning Commission, by a vote of 4-0 (1 Commissioner was absent), approved a Resolution recommending that the City Council approve the Amendment to the General Plan, Amendment to the Bayside Newark Specific Plan, a Vesting Tentative Map, a Design Review, a Minor Use Permit, a Density Bonus Incentive, an Addendum to EIR (SC#2010042012), a Transit Station Dedication Agreement, an Alternate Means of Compliance to Payment of Housing Impact fees, and an Amendment to the Grand Park Agreement. The Planning Commission also approved resolution recommending that the City Council adopt a Zoning Map Amendment.

REVIEW AND APPROVAL

Prepared by - Art Interiano, Deputy Community Development Director
Reviewed by - Steven Turner, Director of Community Development
Reviewed by - Kristopher J. Kokotaylo, City Attorney
Approved by - David J. Benoun, City Manager

Attachments

Attachment 1-Project Plans
Attachment 2- Original Specific Plan Designations
Attachment 3- Station Area Planning Memo
Attachment 4- Bayside Newark SP Unit Allocation Table
Attachment 5-Community Finance Agreement
Attachment 6- Zoning Map Amendment
Attachment 7-TOD Station Dedication Agreement
Attachment 8- Draft Resolution with Exhibits 1 Through 8
Attachment 9- Draft Ordinance with Exhibit A & B
FMC Willow Staff Power Point



FMC WILLOW AND GRAND PARK

NEWARK | CA

INTEGRAL COMMUNITIES | 18-048

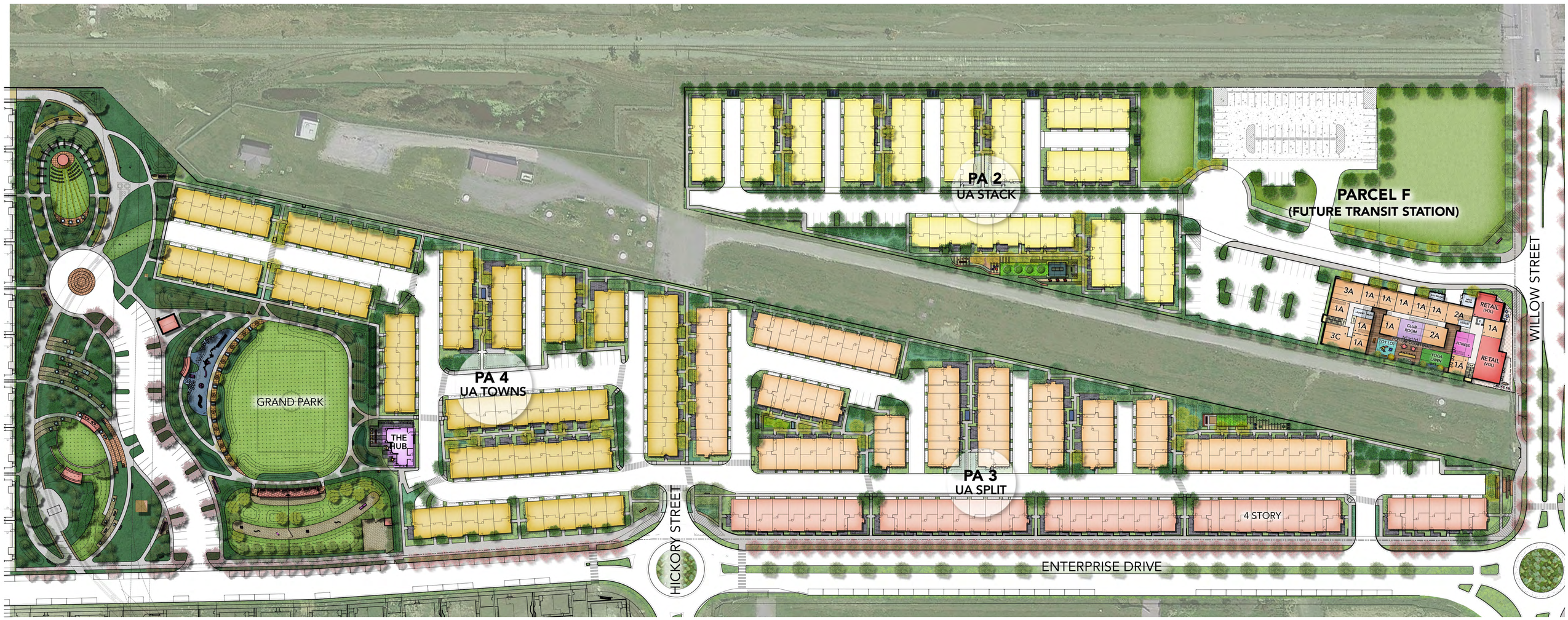
DATE 06 | 24 | 22

1"=50'-0" SCALE NORTH

0 50 100

SITE PLAN | SP 1

URBAN ARENA



PLANT SCHEDULE

TREES	BOTANICAL NAME	COMMON NAME	SIZE	WUCOLS	QTY
	ACER RUBRUM 'REDPOINTE'	REDPOINTE MAPLE	48" BOX	M	10
	FREMONTODENDRON X 'DARA'S GOLD'	DARA'S GOLD FLANNEL BUSH	15 GAL	VL	21
	KOELREUTERIA BIPINNATA	CHINESE FLAME TREE	48" BOX	M	80
	PITTOSPORUM TENUIFOLIUM 'MARJORIE CHANNON'	TAWHIWHI	15 GAL	M	90
	PLATANUS X ACERIFOLIA	LONDON PLANE TREE	24" BOX	L	96

CONTAMINATION CAP TREE SPECIES	BOTANICAL NAME	COMMON NAME	SIZE	WUCOLS	QTY
	ACER BUERGERIANUM	TRIDENT MAPLE	36" BOX	M	14
	AESCULUS CALIFORNICA	CALIFORNIA BUCKEYE	24" BOX	L	3
	ARBUTUS X 'MARINA'	ARBUTUS STANDARD	24" BOX	L	189
	CERCIS OCCIDENTALIS	WESTERN REDBUD MULTI-TRUNK	24" BOX	VL	6
	CHILOPSIS LINEARIS	DESERT WILLOW	36" BOX	VL	29
	MALUS X 'ROYAL RAINDROPS'	ROYAL RAINDROPS CRABAPPLE	24" BOX	M	40
	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	15 GAL	L	59
	PISTACIA CHINENSIS	CHINESE PISTACHE	48" BOX	L	60
	QUERCUS AGRIFOLIA	COAST LIVE OAK MULTI-TRUNK	48" BOX	L	49
	RHUS LANCEA	AFRICAN SUMAC	36" BOX	L	144
	TRISTANIA CONFERTA	BRISBANE BOX	15 GAL	L	54
	ULMUS PROPINQUA 'EMERALD SUNSHINE'	ELM	24" BOX	L	56

SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WUCOLS
	ACANTHUS MOLLIS	BEAR'S BREECH	5 GAL	M
	ARTEMISIA X 'POWIS CASTLE'	POWIS CASTLE ARTEMISIA	1 GAL	L
	COTINUS COGGYGRIA	SMOKE TREE	15 GAL	L
	FARGESIA DENUDATA	BAMBOO	15 GAL	M
	HARDENBERGIA VIOLACEA 'HAPPY WANDERER'	LILAC VINE	1 GAL	M
	HEBE X ANDERSONII 'VARIEGATA'	VARIEGATED HEBE	5 GAL	M
	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	1 GAL	L
	HELLEBORUS FOETIDUS	BEARSFOOT HELLEBORE	5 GAL	L
	HESPERALOE PARVIFLORA	RED YUCCA	5 GAL	VL
	HEUCHERA MAXIMA	ISLAND ALUM ROOT	1 GAL	M
	LAVATERA X CLEMENTII 'RED RUM'	TREE MALLOW	15 GAL	L
	LEUCADENDRON SALIGNUM 'WINTER RED'	WINTER RED CONEBUSH	5 GAL	L
	LEYMUS CONDENSATUS 'CANYON PRINCE'	NATIVE BLUE RYE	5 GAL	L
	LIRIOPE MUSCARI 'SILVERY SUNPROOF'	SILVERY SUNPROOF BLUE LILYTURF	1 GAL	M
	LOMANDRA LONGIFOLIA 'BREEZE'	DWARF MAT RUSH	5 GAL	L
	LOROPETALUM CHINENSE RUBRUM	CHINESE FRINGE FLOWER	5 GAL	L
	LUPINUS ALBIFRONS	BUSH LUPINE	5 GAL	VL
	MISCANTHUS SINENSIS 'GRACILLIMUS'	MAIDEN GRASS	1 GAL	L
	MUHLENBERGIA CAPILLARIS	PINK MUHLY	5 GAL	L

SHRUBS	BOTANICAL NAME	COMMON NAME	SIZE	WUCOLS
	MYRICA CALIFORNICA	PACIFIC WAX MYRTLE	15 GAL	L
	MYRTUS COMMUNIS	COMMON MYRTLE	5 GAL	L
	PENNISETUM SETACEUM 'EATON CANYON'	EATON CANYON FOUNTAIN GRASS	5 GAL	L
	PEROVSKIA ATRIPLICIFOLIA	RUSSIAN SAGE	5 GAL	L
	PHORMIUM TENAX 'DUSKY CHIEF'	NEW ZEALAND FLAX	15 GAL	L
	PODOCARPUS MACROPHYLLUS MAKI	SHRUBBY YEW	15 GAL	L
	POLYSTICHUM MUNITUM	WESTERN SWORD FERN	5 GAL	M
	SANTOLINA CHAMAECYPARISSUS	LAVENDER COTTON	5 GAL	L

BIORETENTION	BOTANICAL NAME	COMMON NAME	SIZE	WUCOLS
	ACHILLEA MILLEFOLIUM	COMMON YARROW	1 GAL	L
	ARISTIDA PURPUREA	PURPLE THREEAWN	1 GAL	L
	BUDDLEIA DAVIDII 'PINK DELIGHT'	PINK DELIGHT BUTTERFLY BUSH	5 GAL	M
	CHONDROPETALUM TECTORUM	CAPE RUSH	5 GAL	L
	DESCHAMPSIA CESPITOSA	TUFTED HAIR GRASS	5 GAL	L
	FESTUCA CALIFORNICA	CALIFORNIA FESCUE	1 GAL	L
	HOLODISCUS DISCOLOR	OCEAN-SPRAY	5 GAL	L
	JUNCUS PATENS	CALIFORNIA GRAY RUSH	1 GAL	L
	MIMULUS AURANTIACUS	STICKY MONKEY FLOWER	5 GAL	VL
	NEPETA X FAASSENII	CATMINT	1 GAL	L

FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-047

DATE 6 | 24 | 22

1"=50' - 0" SCALE

0 50 100

NORTH

URBAN ARENA

CONCEPTUAL PLANTING PLAN | L10

FMC WILLOW AND GRAND PARK

NEWARK | CA

JOB # | 18-048

DATE 5 | 24 | 22

*SUBJECT TO CHANGE

PERSPECTIVE | A01

URBAN ARENA



FMC WILLOW AND GRAND PARK

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DATE 10 | 15 | 21

PRELIMINARY SUBMITTAL

INTEGRAL Communities
A DIVERSIFIED REAL ESTATE COMPANY

THE HUB
PERSPECTIVE | A1.00

URBAN ARENA



PARK SIDE PERSPECTIVE



STREET SIDE PERSPECTIVE



EAST ELEVATION



NORTH ELEVATION



WEST ELEVATION



SOUTH ELEVATION

FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-048

DATE 10 | 15 | 21

PRELIMINARY SUBMITTAL

INTEGRAL Communities
A DIVERSIFIED REAL ESTATE COMPANY

3/16"=1'-0" SCALE
0 8 16

THE HUB
ELEVATIONS | A1.20

URBAN ARENA



FMC WILLOW AND GRAND PARK

NEWARK | CA

JOB # | 18-048

DATE 5 | 24 | 22

*SUBJECT TO CHANGE

PROPOSED - WEST ELEVATION | A07

URBAN ARENA

FMC WILLOW AND GRAND PARK

NEWARK | CA

JOB # | 18-048

DATE 5 | 24 | 22

*SUBJECT TO CHANGE

PROPOSED - SOUTH ELEVATION | A08

URBAN ARENA

FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-048

DATE 10 | 15 | 21

PRELIMINARY SUBMITTAL

INTEGRAL Communities
A DIVERSIFIED REAL ESTATE COMPANY

UA STACK
PERSPECTIVE | A2.00

URBAN ARENA

FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-048

DATE 10 | 15 | 21

PRELIMINARY SUBMITTAL

INTEGRAL Communities
A DIVERSIFIED REAL ESTATE COMPANY

UA SPLIT
PERSPECTIVE | A3.00

URBAN ARENA



FRONT ELEVATION



LEFT ELEVATION



REAR ELEVATION



RIGHT ELEVATION

FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-048

DATE 10 | 15 | 21

PRELIMINARY SUBMITTAL

INTEGRAL Communities
A DIVERSIFIED REAL ESTATE COMPANY

3/16"=1'-0" SCALE

0 8 16

UA SPLIT
6-PLEX ELEVATIONS | A3.43

URBAN ARENA



FRONT PERSPECTIVE



REAR PERSPECTIVE

FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-048

DATE 10 | 15 | 21

PRELIMINARY SUBMITTAL

INTEGRAL Communities
A DIVERSIFIED REAL ESTATE COMPANY

3/16"=1'-0" SCALE

0 8 16

UA SPLIT

6-PLEX PERSPECTIVES | A3.44

URBAN ARENA



FRONT ELEVATION



LEFT ELEVATION



REAR ELEVATION



RIGHT ELEVATION

FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-048

DATE 10 | 15 | 21

PRELIMINARY SUBMITTAL

INTEGRAL Communities
A DIVERSIFIED REAL ESTATE COMPANY

3/16"=1'-0" SCALE
0 8 16

UA SPLIT
7-PLEX ELEVATIONS | A3.53

URBAN ARENA

FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-048

DATE 10 | 15 | 21

PRELIMINARY SUBMITTAL

INTEGRAL Communities
A DIVERSIFIED REAL ESTATE COMPANY

UA TOWNS
PERSPECTIVE | A4.00

URBAN ARENA



FRONT ELEVATION

SCALE: 1/8" = 1'-0"



REAR ELEVATION

SCALE: 1/8" = 1'-0"

MATERIAL NOTES:

- STUCCO FINISH SHALL BE 16/20 GRAIN SAND FINISH
- DECKS, POSTS, AND RAILINGS SHALL BE SMOOTH FINISH FIBER CEMENT

FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-048

DATE 10 | 15 | 21

PRELIMINARY SUBMITTAL

INTEGRAL Communities
A DIVERSIFIED REAL ESTATE COMPANY

1/8"=1'-0"SCALE

0 8 16

UA TOWNS

6-PLEX FRONT & REAR ELEVATIONS | A4.63

URBAN ARENA



SIDE ELEVATIONS

SCALE: 1/8" = 1'-0"



FRONT PERSPECTIVE



REAR PERSPECTIVE

MATERIAL NOTES:

- STUCCO FINISH SHALL BE 16/20 GRAIN SAND FINISH
- DECKS, POSTS, AND RAILINGS SHALL BE SMOOTH FINISH FIBER CEMENT

FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-048

DATE 10 | 15 | 21

PRELIMINARY SUBMITTAL

INTEGRAL Communities
A DIVERSIFIED REAL ESTATE COMPANY

1/8"=1'-0" SCALE

0 8 16

UA TOWNS

6-PLEX SIDES & PERSPECTIVES | A4.64

URBAN ARENA

LEGEND

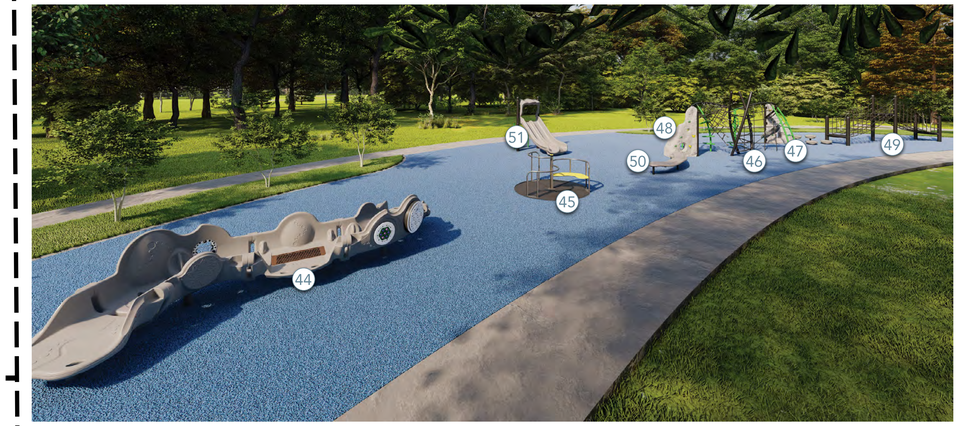
- SIDEWALK
- ENHANCED PAVING
- DECOMPOSED GRANITE
- (1) PGE EASEMENT
- (2) TRANSMISSION TOWER
- (3) ARV MANHOLE
- (4) ARV ACCESS ROAD
- (5) EMERGENCY VEHICLE ACCESS
- (6) BAY TRAIL
- (7) RESTROOM
- (8) MONUMENT SIGN
- (9) GRASS SPORTS FIELD
- (10) OPEN LAWN
- (11) BERM/MOUND
- (12) BIORETENTION BASIN
- (13) SMALL DOG PARK
- (14) LARGE DOG PARK
- (15) DOG PARK OVERHEAD
- (16) DOG PARK PLAY EQUIPMENT
- (17) PARKING LOT
- (18) OVERHEAD WITH VIDEO SCREEN
- (19) PLAY AREA OVERHEAD
- (20) AMPHITHEATER
- (21) AMPHITHEATER OVERHEAD
- (22) WILDFLOWER GARDEN
- (23) ARBOR WITH VINES
- (24) STRING LIGHTS AND POSTS
- (25) GAZEBO
- (26) 3'-6" STEEL PLAYGROUND FENCE
- (27) 3'-6" STEEL DOG PARK FENCE
- (28) LOCKING GATE - TYPICAL
- (29) LOCKING GATE - 10' MAINTENANCE

- PLANTING AREA
- ARTIFICIAL PLAY SURFACE
- OPEN LAWN
- (30) BENCH SEATING
- (31) GROUP TABLE SEATING
- (32) DRINKING FOUNTAIN
- (33) STEEL/ALUMINUM BIKE RACKS AND BIKE LOCKERS (SHORT-TERM AND LONG-TERM)
- (34) TRASH RECEPTACLE
- (35) PET WASTE RECEPTACLE
- (36) TREE GRATE
- (37) PERMANENT CORN HOLE SETS
- (38) PERMANENT PING PONG TABLES
- (39) TEMPORARY WEDDING CHAIRS
- (40) PLAY WALL/STEPS
- (41) SEAT WALL
- (42) ACCESSIBLE BAY TRAIL BYPASS PATH
- (43) USD MANHOLE
- (44) PLAY EQUIPMENT - SERPENTINE (INCLUSIVE) BY PLAY & PARK STRUCTURES
- (45) PLAY EQUIPMENT - ORBIT (INCLUSIVE) BY PLAY & PARK STRUCTURES
- (46) PLAY EQUIPMENT - HELIX CLIMBER BY PLAY & PARK STRUCTURES
- (47) PLAY EQUIPMENT - AURA ESCAPE BY PLAY & PARK STRUCTURES
- (48) PLAY EQUIPMENT - ANGLE ROCK SOCKET BY PLAY & PARK STRUCTURES
- (49) PLAY EQUIPMENT - DOUBLE CABLE CROSS BY PLAY & PARK STRUCTURES
- (50) PLAY EQUIPMENT - STRATA BALANCE BEAM BY PLAY & PARK STRUCTURES
- (51) PLAY EQUIPMENT - 4' HILLSIDE VELOCITY SLIDE BY PLAY & PARK STRUCTURES
- (52) PLAY EQUIPMENT - CLIMBING HAND HOLDS BY PLAY & PARK STRUCTURES
- (53) RAISED PLATFORM WITH ADA ACCESSIBLE RAMP

NOTES

- ALL PARK LANDSCAPING SHALL BE COMPLIANT WITH THE STATE OF CALIFORNIA MODEL WATER EFFICIENT LANDSCAPE ORDINANCE, THE MUNICIPAL REGIONAL STORMWATER NPDES PERMIT AND LOCAL ORDINANCES.
- LED PATHWAY AND PARKING LOT LIGHTING WITH PHOTOCELL AND TIMER CONTROLS SHALL BE LOCATED BY AN ELECTRICAL ENGINEER DURING THE CONSTRUCTION DOCUMENT PHASE.
- PARKING LOT SHALL MEET THE CURRENT ZONING STANDARDS PER THE CITY OF NEWARK CODE OF ORDINANCES.
- AMPHITHEATER AND GAZEBO SHALL EACH HAVE A DEDICATED POWER SOURCE FOR FUTURE EVENTS.
- DRINKING FOUNTAINS SHALL INCLUDE A BOTTLE FILLER AND/OR PET BOWL WHERE APPROPRIATE.
- PING PONG TABLES AND CORN HOLE SETS WILL BE PERMANENTLY EMBEDDED OR SURFACE MOUNTED. PING PONG TABLE AND CORN HOLE SET MATERIAL SHALL BE CONCRETE, METAL, OR OTHER DURABLE, LOW-MAINTENANCE MATERIAL.



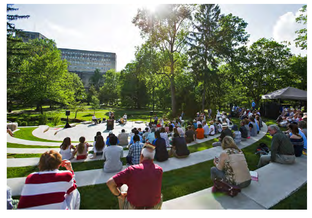






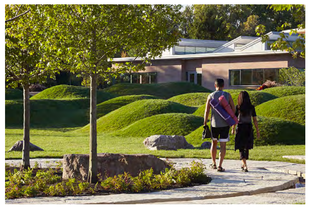












FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-047

DATE 6 | 24 | 22

1"=30' - 0" SCALE

0 30 60

NORTH

GRAND PARK CONCEPTUAL LANDSCAPE PLAN | L2

URBAN ARENA

PREVIOUS PLAN - 11 | 08 | 18

QTY	AMENITY
1	RESTROOM
2	ENTRY SIGNAGE
1	GRASS SPORTS FIELD
6	OPEN LAWN
22	BERM/MOUND
2	BIORETENTION BASIN
1	SMALL DOG PARK
1	LARGE DOG PARK
1	DOG PARK OVERHEAD
6	DOG PARK PLAY EQUIPMENT
1	PLAY AREA - AGES 2-5
1	PLAY AREA - AGES 5-12
1	PLAY AREA OVERHEAD
5	PLAY AREA PLAY EQUIPMENT
1	AMPHITHEATER
2	AMPHITHEATER OVERHEAD
1	WILDFLOWER GARDEN
1	ARBOR WITH VINES
1	STRING LIGHTS AND POSTS
1	GAZEBO

QTY	AMENITY
41	BENCH SEATING
32	GROUP TABLE SEATING
4	DRINKING FOUNTAIN
25	BIKE RACKS - INDUSTRY STANDARD
11	TRASH RECEPTACLE
8	PET WASTE RECEPTACLE
10	TREE GRATE
2	CORN HOLE SET
2	PING PONG TABLE
4	SEAT WALL
0	6' CMU SCREEN WALL WITH PILASTERS
1	TEMP. GROUNDWATER TREATMENT EQUIPMENT



CURRENT PLAN

QTY	AMENITY
1	RESTROOM
2	ENTRY SIGNAGE
1	GRASS SPORTS FIELD
4	OPEN LAWN
22	BERM/MOUND
2	BIORETENTION BASIN
1	SMALL DOG PARK
1	LARGE DOG PARK
1	DOG PARK OVERHEAD
6	DOG PARK PLAY EQUIPMENT
1	PLAY AREA - AGES 2-5
1	PLAY AREA - AGES 5-12
1	PLAY AREA OVERHEAD
5	PLAY AREA PLAY EQUIPMENT
1	AMPHITHEATER
2	AMPHITHEATER OVERHEAD
1	WILDFLOWER GARDEN
1	ARBOR WITH VINES
1	STRING LIGHTS AND POSTS
1	GAZEBO

QTY	AMENITY
41	BENCH SEATING
32	GROUP TABLE SEATING
4	DRINKING FOUNTAIN
25	BIKE RACKS - INDUSTRY STANDARD
11	TRASH RECEPTACLE
8	PET WASTE RECEPTACLE
10	TREE GRATE
2	CORN HOLE SET
2	PING PONG TABLE
5	SEAT WALL
0	6' CMU SCREEN WALL WITH PILASTERS
1	TEMP. GROUNDWATER TREATMENT EQUIPMENT



FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-047

DATE 6 | 24 | 22

1'=30' - 0" SCALE

0 30 60

NORTH

GRAND PARK AMENITY COMPARISON | L3

URBAN ARENA

WILLOW STREET

ENTERPRISE DRIVE



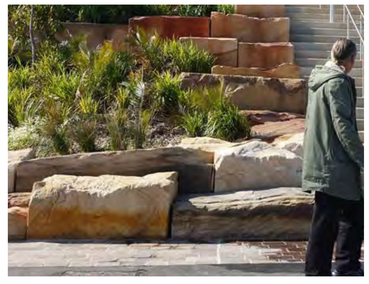
8' MASONRY SOUND WALL
RETAINING WALL WITH 8' MASONRY SOUND WALL



CURVED RETAINING WALL



18" SEATING STEPS
18" AMPHITHEATER SEATING STEPS



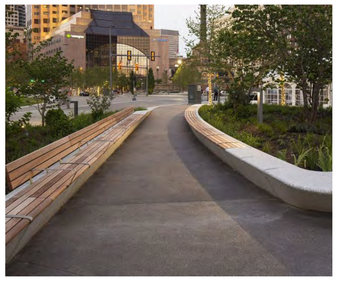
PLAY WALL/STEPS



RETAINING WALL WITH 6' TUBE STEEL FENCE
RETAINING WALL



18" SEAT WALL



18" RETAINING/SEAT WALL
36"-42" PLANTER WALL

FENCE AND WALL LEGEND

SYMBOL	DESCRIPTION
	RETAINING WALL
	CURVED RETAINING WALL
	RETAINING WALL WITH 8' MASONRY SOUND WALL
	RETAINING WALL WITH 6' TUBE STEEL FENCE
	PLAY WALL/STEPS
	18" SEAT WALL
	18" SEATING STEPS
	18" AMPHITHEATER SEATING STEPS
	36"-42" PLANTER WALL
	36" PATIO FENCE WITH PILASTERS
	18" RETAINING/SEAT WALL
	MONUMENT SIGN (SEE L1 FOR RENDERINGS)
	42" DOG PARK FENCE
	36" SPLIT RAIL FENCE

FMC WILLOW AND GRAND PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-047

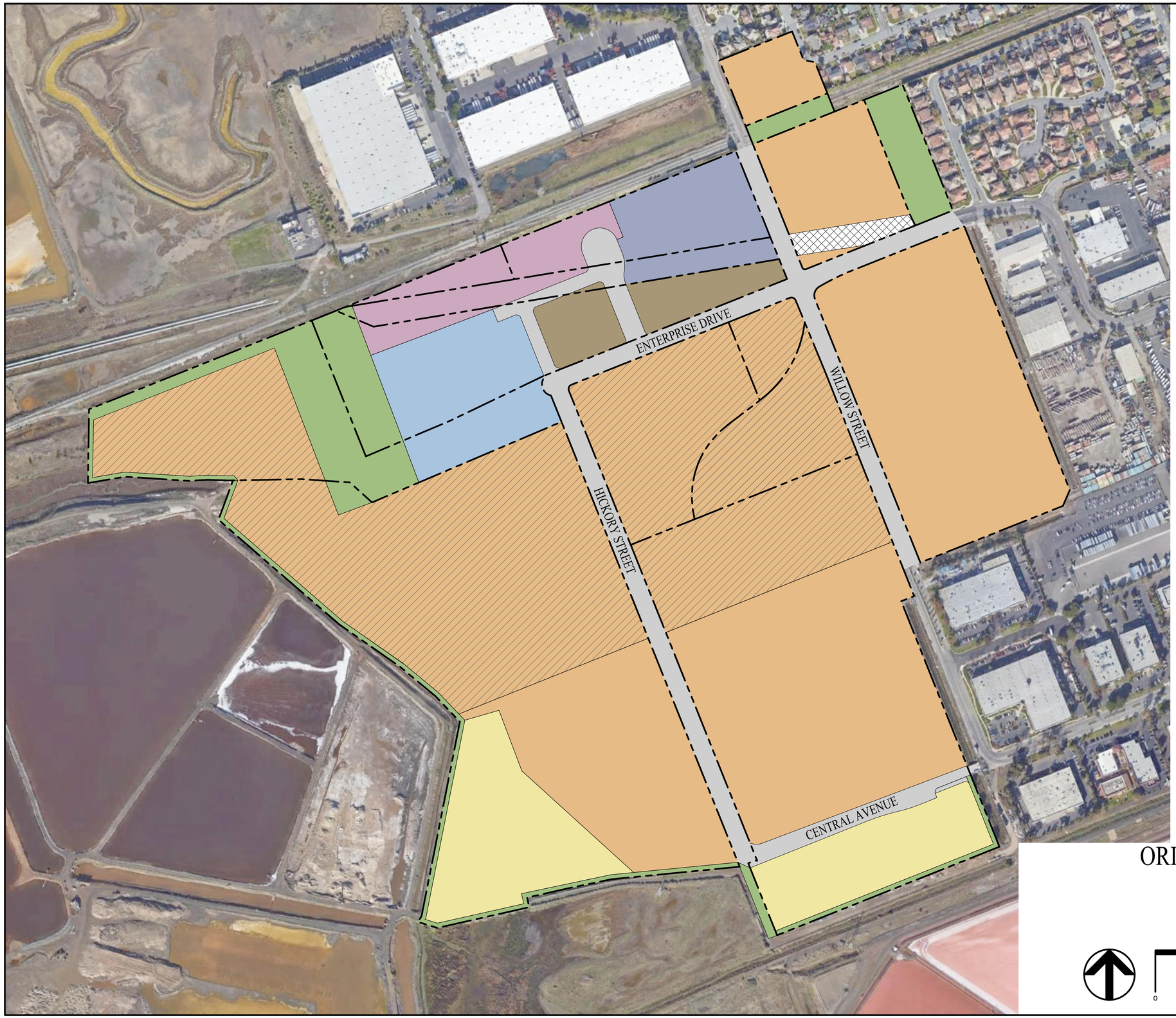
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1'=50' - 0" SCALE
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NORTH

URBAN ARENA

FENCE AND WALL PLAN | L8



LEGEND

- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- MEDIUM/HIGH DENSITY RESIDENTIAL
- COMMERCIAL/RETAIL
- COMMERCIAL/OFFICE
- TRANSIT STATION
- PARKS & RECREATION OPEN SPACE
- RESTRICTED USE AREAS

TRACT 8559
ORIGINAL BAYSIDE SPECIFIC PLAN
LAND USE DESIGNATIONS

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

SCALE: 1"=200' DATE: MAY 23, 2022

0 200 400 600

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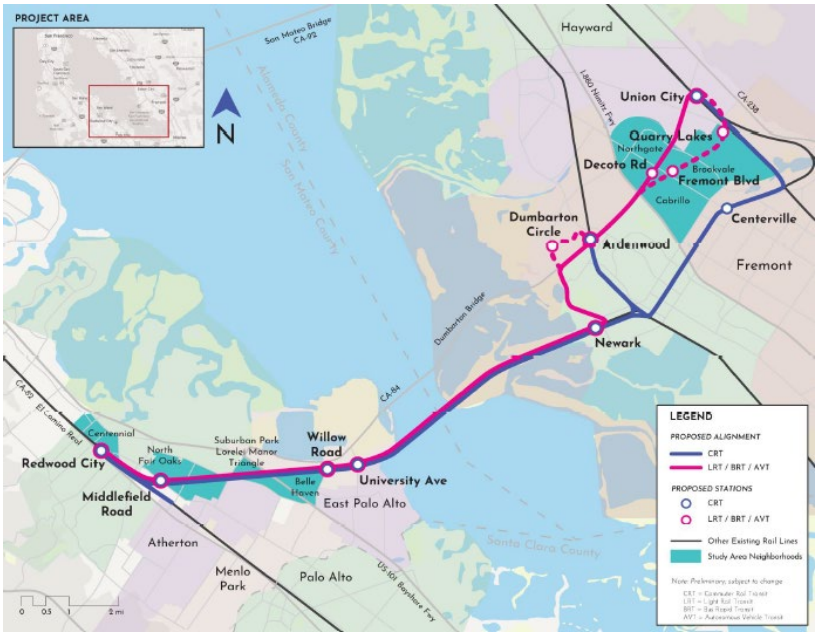
MEMORANDUM

To:	Art Interiano and Mandy Kang City of Newark
From:	Adam Dankberg, P.E. and Mike Iswalt, AICP Kimley-Horn and Associates, Inc.
Date:	June 27, 2022
Subject:	City of Newark Station Area Planning

Introduction

Kimley-Horn is providing support to the San Mateo County Transit District ("District") in its coordination with the City of Newark ("City") to identify anticipated transit station facilities at a potential future Newark Station location on the Dumbarton Rail Corridor (DRC). The City of Newark has planned for a future Newark Station adjacent to the proposed FMC Willow development project site on Willow Street. **Figure 1** shows the DRC corridor and the location of the Newark Station.

Figure 1: DRC Alignments, Stations, and Neighborhoods (Source: HNTB, 2021)



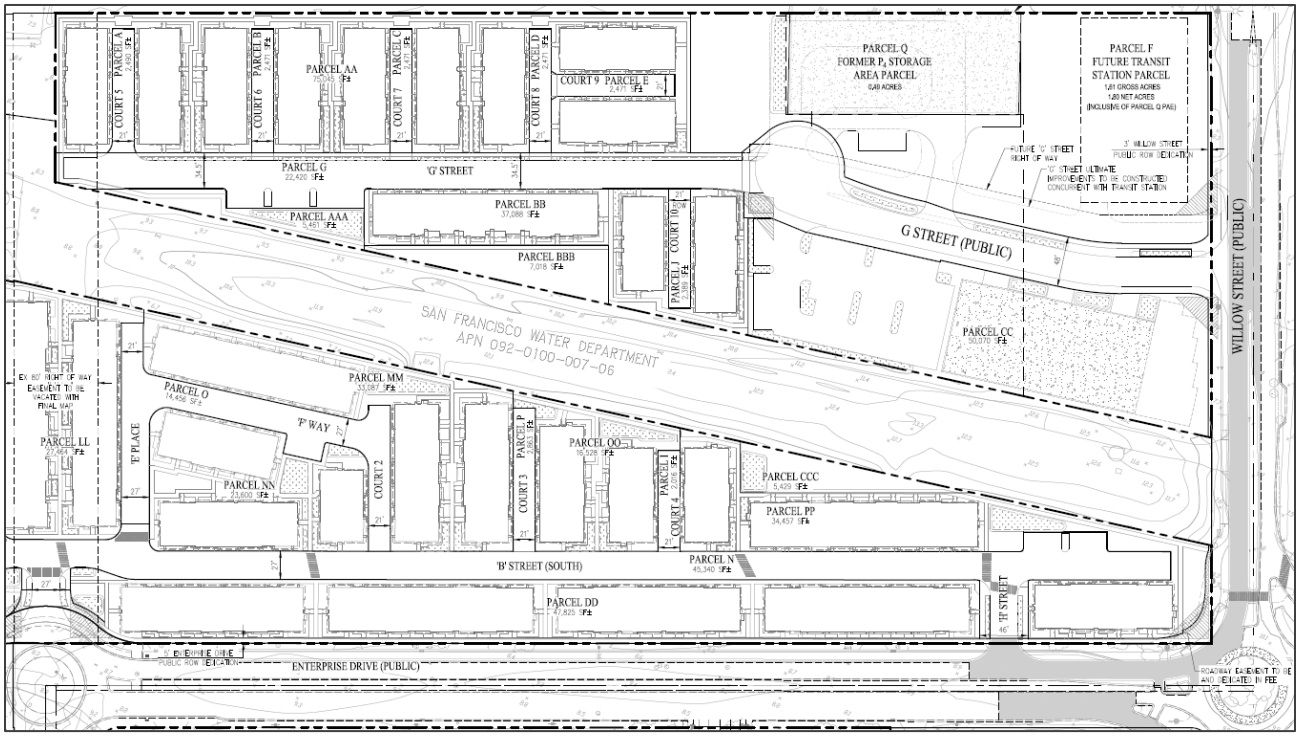
The DRC comprises approximately 18 miles of existing rail infrastructure that includes the Dumbarton Rail Bridge across the southern part of San Francisco Bay. The DRC has been studied for future transit service that provides fast, seamless connections between Redwood City, Menlo Park, and Caltrain on the Peninsula with Fremont, Union City, and BART in the East Bay. The goal for any future project is to improve transit times, reduce traffic congestion, and reduce vehicle-miles traveled (VMT) and greenhouse gas emissions (GHGs) for the increasing population and employment in the South Bay.

Planning for the DRC project has recently advanced through efforts by CrossBay Transit Partners (CBTP) in a partnership with the District. These efforts included alternatives evaluation, ridership forecasting, cost estimating, and conceptual engineering. A preferred transit mode has not been selected to date and the

District is currently considering its next steps for the DRC. Modes that have been considered to date include commuter rail (CRT), light rail (LRT), bus rapid transit (BRT), and autonomous vehicle transit (AVT).

A station to serve the potential transit project in the DRC is being considered adjacent to the FMC Willow project development site, which borders the DRC to the south. **Figure 2** shows the proposed site plan for the FMC Willow development in the vicinity of the DRC corridor. The development project proposes a mix of residential units, retail space, and the DRC station supportive facilities on 22.1 acres. The site is split diagonally by the San Francisco Water Department's Hetch Hetchy system aqueduct. The area to the north of the public portion of G Street would include the DRC station facilities and associated parking. The site plan shows an interim use of that area prior to the construction of the transit station.

Figure 2: FMC Willow Site Plan, June 2022 (Source: City of Newark)



The Newark Station area planning findings presented in this memorandum summarize the following:

- **Newark Station Ridership Projections:** This study presents a review of previous DRC ridership forecasts and develops scenario-based daily and peak hour mode of access estimates
- **Station Facilities Requirements and Sizing: P**resents a list of required station facilities and transit-supportive infrastructure along with the anticipated footprint for each amenity
- **Station Parking:** Recommends potential structured parking configurations
- **Station Layouts and Site Circulation:** Presents an example site plan layout that incorporates the station facility recommendations and transit station access best practices

This effort has been informed through coordination with the District, City, and AC Transit staff.

Station Ridership

Station ridership forecasts were developed using the most recent DRC reports from the District's work with CBTP as a starting point. The most recent DRC ridership forecasts (HDR, 2021), used a combination of land use data and forecasting methods to develop route and stop level ridership for four potential modes: CRT, LRT, BRT, and AVT. All modal options assumed a standalone DRC system that connected with other modes at either end of the corridor but were not interlined with other services. For each mode, the report identified service plans and travel time estimates.

Ridership forecasts were developed for two alignment options—Decoto and Quarry Lakes—which differ only in how they route through the City of Fremont. The 2040 ridership forecasts do not differ considerably by mode or alignment. **Figure 3** shows the 2040 results from the ridership report. Newark Station is forecasted to provide 700 to 1,150 boardings per day.

Figure 3: 2040 Ridership Forecasts from Ridership Report (Source: HDR)

Table 4.7: Daily 2040 Boardings by Station

Station Name	LRT and BRT		AVT	
	Decoto	Quarry Lakes	Decoto	Quarry Lakes
Redwood City	3,900	3,900	5,300	5,400
Middlefield Road	3,100	3,100	3,400	3,300
Willow Road	3,300	3,300	4,600	4,600
University	400	400	550	550
Newark	1,150	1,100	700	700
Ardenwood	1,400	1,250	1,800	1,600
Fremont	1,800	1,700	2,600	2,400
Union City	2,450	2,350	2,200	2,100
Quarry Lakes		1,200		1,700
Total Boardings	**17,500**	**18,300**	**21,150**	**22,350**

Source: HDR, Inc.

The DRC forecasts may understate ridership for a few reasons:

- A Newark Station could serve as a primary park-and-ride (PNR) location for commuters given its convenient access to I-880 and SR 84
- The forecasts may not fully account for recent and planned residential growth near the station in Newark
- The forecasts may not fully account for multimodal integration (or interlining) at either end of the alignment

Given the numerous uncertainties regarding the ultimate configuration and service characteristics of the DRC, additional ridership assessment and scenario development was performed as part of this effort. The objective of this scenario planning is to ensure that station facilities are sufficiently sized to handle a range of ridership outcomes for the station.

A more detailed analysis of population and employment along the corridor was conducted to develop a high and low estimate for Newark Station ridership. This process included the following:

1. Calculate the population and labor force within three miles of an FMC Willow Newark Station for existing development and future growth associated with Bayside Newark. **Figure 4** shows the location of the Bayside Newark Specific Plan area (formerly the Dumbarton Transit Oriented Development Specific Plan), which includes the FMC Willow development.

Figure 4: Bayside Newark and the Surrounding Area (Source: Dumbarton TOD Specific Plan, 2010)



2. Develop a 0.5-mile buffer around the DRC and its stations and calculate the number of existing and future jobs in the buffer using data from the US Census Longitudinal Employment Housing Dynamics (LEHD).
3. Analyze existing commute patterns from the TOD Specific Plan and surrounding areas to the Peninsula using current Longitudinal Employer-Household Dynamics (a U.S. Census Bureau product) data.
4. Estimate how this commute pattern will change in the future with the added speed and convenience of DRC service.
5. Develop station access mode shares using station access surveys from representative BART and Capitol Corridor stations and apply these percentages to the ridership forecasts to estimate the amount of walk, bike, transit, pickup-up/drop-off, and park & ride (PNR) activity at Newark Station.
6. Develop parking demand calculations using the PNR forecast and applying a vehicle occupancy rate of 1.2 persons per vehicle.

Figure 5 shows the DRC corridor analysis using LEHD jobs data.

Figure 5: DRC, Stations, and 2018 Job Centers by Census Block (Source: US Census LEHD)

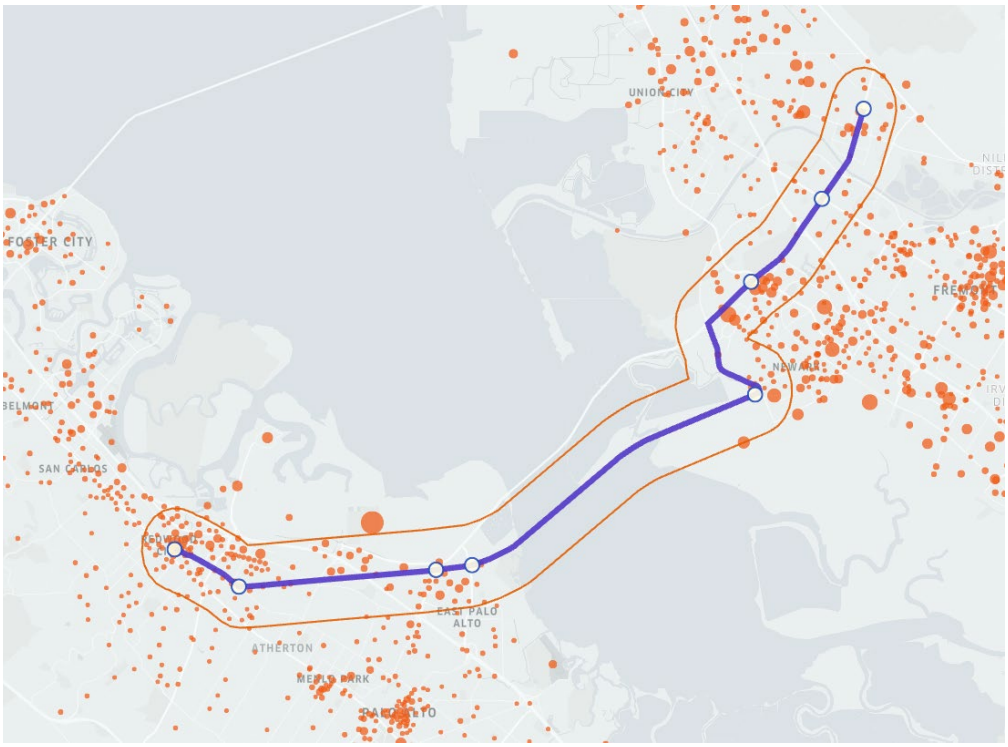


Table 1 shows a Newark Station ridership scenario and parking estimate findings using the methodology described above. The analysis indicates 1,200 daily boardings in the low-demand scenario and 1,800 daily boardings in the high-demand scenario.

The low- and high-demand scenarios vary with regard to how many commute trips from Newark to locations along the DRC would use the future transit service. The estimates also differ with regard to the access mode shares. The high-demand scenario assumes a greater level of non-auto access, reflecting a growth in the multimodal (active transportation and transit) networks around the station area. The walk and bike access mode shares of 15% reflect the close proximity of residential units to the station. This estimate was calibrated based on the FMC Willow project size and other current and anticipated residential development projects within the station walkshed.

For the parking estimates, the PNR percentages for the low- and high-demand scenarios are within the range of typical commuter stations in the Bay Area. Lower PNR percentages can be achieved through expansion of the non-motorized and transit network as well as parking pricing and other parking management strategies. The parking estimates indicate that 500 to 525 parking spaces are required to accommodate PNR demand at the station.

Table 1: Newark Station Ridership and Parking Forecasts

Station Boardings	Low Demand		High Demand		Description/Notes
Daily	1,200		1,800		• Used the DRC Ridership and Operations (2021) report as a starting place; developed a more detailed analysis of accessible jobs to Newark
Peak Hour	300		450		• Peak hour ridership is approx. 20–25% of daily (per Caltrain); using 25% for this analysis
Mode of Access (%)					
Access Mode	***%***	***Daily Trips***	***%***	***Daily Trips***	
Walk	15%	180	15%	270	• Walk access is limited by the number of units within walking distance (1/2 mi)
Bike	15%	180	15%	270	• Bike access is limited by the number of units within biking distance (2–3 mi) • Bike access mode share is currently 17% on Caltrain
Transit	10%	120	20%	360	• Bus access will depend on future local AC service or private shuttles
Pickup/Drop-off	10%	120	15%	270	• Combination of kiss-and-ride and TNC services
Park-and-Ride	50%	600	35%	630	• This percentage is consistent with other rail systems in the Bay Area and depends on the attractiveness of the station for regional commuters
Vehicle Occupancy	**1.2**				• Persons per vehicle
Parking Demand (spaces)	**500**		**525**		• Parking demand for a Newark Station is in the range of 500 to 525 spaces • Assumes 1.2 people per vehicle

Facility Requirements

A range of station facilities and amenities are required to develop a comprehensive Newark Station. These facilities are largely independent of the DRC transit mode that is ultimately selected. The amenities include:

- **Platforms:** Platforms along the DRC will vary by length and width depending on the transit mode. CRT platforms are 800 to 1,000 feet in length and 20 to 30 feet in width. LRT, BRT, and AVT are 200 to 400 feet in length and 10 to 20 feet in width. These are assumed to be provided within District right-of-way
- **Platform Amenities: I**ncludes platform shelters, ticket vending machines, and seating on the platforms, assumed to be provided within District right-of-way
- **Station Operator Buildings: S**pace related to transit operations, including break rooms and restrooms. These are anticipated to be used by bus operators for routes that terminate at the station and DRC station maintenance and operation crews
- **Customer Amenities and Security:** Space for customer amenities, including public restrooms, security kiosk(s), pedestrian circulation areas, and communal plazas/waiting areas
- **Bike Facilities:** Bike parking (racks, lockers, or storage rooms)
- **Signage and Wayfinding:** Variable message signs providing information on vehicle estimated time of arrivals (ETAs) and delay status

- **Bus Bays and Platforms:** Space for connecting bus and shuttle services, including bus bays, layover bays, bus circulation space, and passenger circulation areas
- **Pick-up/Drop-off Curb Space: S**pace for passenger pick-up/drop-off, taxi stands, or transportation network companies (TNCs) zones
- **Parking: S**urface or structured parking for PNR passengers

Providing 525 parking spaces to satisfy Newark Station PNR demand will require building a parking structure. The dimensions of a parking structure are dictated by the parking configuration, the number of drive aisles and circulation space, and the slope of the floors to achieve an acceptable grade for vehicle maneuvers and to maintain sufficient vertical clearance between floors.

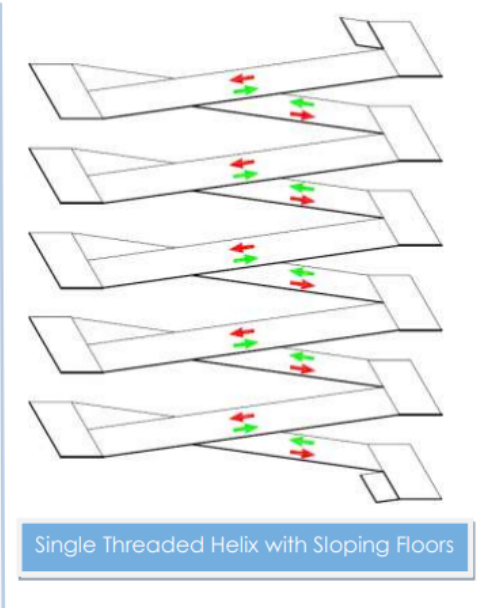
Figure 6 presents a typical parking structure layout, a single threaded helix design with sloping floors, two-way traffic flow in the center of each floor, and 90-degree perpendicular parking.

Figure 6: Parking Structure – Single Threaded Design (Source: Parking Structure Design Guidelines, Kimley-Horn, 2016)

Single Threaded Design

In order to develop a reasonably efficient free-standing parking structure, the **minimum** dimensions needed are about 122 feet in width by 155 feet in length. A width of 122 feet allows for a two-bay facility with two-way traffic flow and 90-degree parking. A facility with two-way traffic and a five-foot rise along each bay requires approximately 155 feet in length for a minimum floor-to-floor height of about ten feet. That is, one 360-degree turn within the facility equates to a vertical rise of ten feet. A structure in this configuration has sloping floors along both façade sides. However, sloping floors can make façade treatments challenging. On larger sites that allow a structure length of about 255 feet, one bay can be sloped rising 10 feet with opposite façade having a "level" floor.

Because of the number of 360° turns needed to ascend in a single threaded structure, the number of levels (floors) should preferably be limited to a maximum of six, otherwise the number of turns required and the number of spaces passed becomes inconvenient. A structure with a two-bay single thread design has a capacity for a maximum of approximately 750 spaces. The isometric diagram to the right represents a two-bay single-threaded helix.



Single Threaded Helix with Sloping Floors

The footprint for this design is approximately 20,000 square feet per floor (160 feet in length by 125 feet in width). Each floor in this single-threaded design can accommodate approximately 125 vehicles. However, this would require five floors to accommodate the 525 PNR spaces. A maximum of four floors is desired to keep the height of the parking structure consistent with the surrounding land uses. Providing 525 spaces in a four-floor design would require 24,000 square feet per floor with 150 parking spaces per floor. This can be achieved by lengthening the structure from 160 feet to approximately 200 feet. A surface parking option providing the same number of spaces would require over 2.5 acres of space. The parking structure could also serve the retail uses on the site in a shared parking configuration if it is located in close proximity. The structure may also feature ground floor retail or station supportive facilities depending on its ultimate configuration.

Table 2 presents key station elements along with the facility requirements and information on key factors. **Table 3** presents the total square footage requirements for the station.

Table 2: Station Facility Sizing

Type	Facilities Requirements	Notes
Platforms	Commuter Rail = 800 feet-1,000 feet x 20-30 feet LRT = 300-400 feet x 15-20 feet BRT = 75-150 feet x 10-15 feet AVT = 50-100 feet x 10-15 feet depending on # of bays	• Platform length varies by mode • Width will vary by the number of riders, amenities such as shelters, and the number of vertical circulation elements • 2 side or 1 center running platform • Grade separated track crossing (tunnel or bridge) with vertical circulation elements (escalators, elevators, stairs)
Station Buildings / Head House	Small building housing the features below	• Station facilities could be included in part of a parking structure
Customer service / back of house	None – customer service buildings, and back of house facilities are likely not required	• Ticketing kiosks can be integrated with the platforms • Indoor lobbies are not required
Driver break room	500 sf	• AC Transit requires this for a terminus location
Maintenance closet	75 sf	
Communications closet	75 sf	
Public restrooms	2 @ 72 sf each (2 unisex)	
Driver restrooms	2 @ 72 sf each (2 unisex)	
Station retail (optional)	2 spaces @ 250 sf each	• Small coffee and food retailers
Security kiosk	1 @ 35 sf	
Bus bays & platforms	3 bus bays @ 60 feet length x 36.5 feet width (including sawtooth and one-way drive aisle) plus min 10 feet platforms	• Assuming max vehicle length of 40 feet standard bus • Assumes “sawtooth” design; straight curb would require additional length but less width
Shared pick-up/drop-off curb	7 pick-up/drop-off spaces @ 25 feet = 175 feet linear curb space, with 10 feet wide pedestrian loading area	• Utilized for private pick-up/drop-off, transportation network companies (TNCs), taxis, and others
Bike parking	40 spaces (10 racks + 30 secured) 10 racks = 420 sf (racks plus clear path of travel) 30 secured = 225 sf (unmanned)	• Caltrain/MTC survey from 2014 cited 6% of bicyclists parked bikes at stations, although this percentage varied considerably by location and the data are several years old • The bike parking share will also be influenced by the available capacity on the vehicles

Type	Facilities Requirements	Notes
		• Assuming 15% for the station, 10 racks and 30 secured bike station spaces is consistent with Caltrain data; bike stations can be manned (14 sf per bike) or unmanned (7.5 sf per bike)
Vehicle parking	525 spaces; footprint will vary based on the design • 4 floors using 125' x 192' = 24,000 sf per floor	• Two bays, two-way traffic, 90-degree parking, sloped floor, 10 feet of vertical clearance = 150 spaces per floor

Table 3: Station Sizing Summary

Type	Square Footage (ground plane)	Notes
Station Platforms	N/A, located within District right-of-way	
Station Buildings / Head House Footprint	2,000 sf	• Driver break rooms, closets, kiosks, restrooms • Does not include additional pedestrian circulation
Station Pedestrian Plaza & Circulation	10,000 sf (approx)	• Additional space for pedestrian circulation/plaza between the station buildings and surrounding uses
Bus Bays & Circulation	8,500 sf	• 3 bays @ 2,190 sf each with 3 x 10 feet wide platforms • Includes vehicle circulation area
Bike Parking	650 sf	• 10 space bike rack (includes circulation space) • 30 space secured unmanned location
Pick-up/Drop-off	3,325 sf	• 175 feet linear curb * (10 feet wide pedestrian area + 9 feet wide vehicle pullout area) • Does not include vehicle circulation/drive lanes
Vehicle Parking	4 floors @ 24,000 sf per floor	
Total Station Area	**48,475 sf (1.1 ac)**	• Additional access and circulation area may be required depending on configuration (e.g., to facilitate bus turnaround or provide pedestrian/bicycle access corridor)

The total station facilities require at least 1.1 acres of space on-site, outside of District right-of-way. The facility requirements should be considered a minimum, as additional space for bus turning and bicycle and pedestrian access may be needed depending on the roadway configuration. Additional space for station-

related amenities and public spaces would increase the level of comfort at the station and contribute to its success as a focal point of the FMC Willow development.

Station Access Configuration Guidance

It is emphasized that the effectiveness of a multimodal facility is determined not only by appropriate sizing of the facilities, but also in their access and circulation configuration. This section provides guidance and best practices for station access and circulation that should be used in determining the configuration, placement, and access of the station access facilities.

Bus Access and Bay Configuration

- Bus access to/from G Street is required from both the north and southbound directions on Willow Street. The configuration of the G Street/Willow Street intersection should be analyzed further to determine the appropriate intersection geometrics and control to facilitate safe bus movements while minimizing delay
- Buses must be able to turn around within the site and depart to either the north or south on Willow Street, regardless of which direction they entered the site from
- The bus bays must accommodate bus turns for both a 40-foot heavy-duty transit vehicle and a 45-foot commuter coach typical of the AC Transit fleet
- The bus transit center and bus circulation at the station should be consistent with AC Transit's *Designing with Transit* and *Multimodal Corridor Design Guidelines*
- Bus lanes should have a minimum width of 11 feet; 12 feet is preferred
- Bus bays can be configured in a sawtooth or a straight-curb configuration but should be designed to allow for independent access/departure to/from each bay
- Layover space should be provided adjacent to the bus bays or nearby, allowing for circulation between active bus bays and layover space
- Bus bays should be located as close as possible to the station platforms, within direct line of sight to the platforms, and with no roadways or parking areas in between the bus bays and the platforms
- Bus circulation to/from the bus bays should avoid conflicts with autos and parking structure ingress/egress to limit the potential for delay due to conflicts. Bus circulation should occur through parking aisles with angled or perpendicular parking stalls
- Bus bays should be separated from pick-up/drop-off facilities, preferably with a distinct path of travel from autos
- Bus platforms should include amenities, such as benches, real-time arrival/departure signage, and shelters

Pedestrian Circulation/Accessibility

- All paths of travel between the platforms, station facilities, parking, and adjacent land uses should be ADA compliant
- A direct pedestrian path of travel should be provided between Willow Street, the station platforms, and station facilities
- The pedestrian path of travel should be a minimum of 10 feet wide (minimum of 15 feet if shared with bikes) and include aesthetic features, such as landscaping. It should minimize conflicts with auto and bicycle circulation

Bicycle Circulation/Accessibility

- A convenient and comfortable bicycle path of travel should be provided between Willow Street, the station platforms and station facilities, including bicycle parking at the station
- The bicycle path of travel should minimize conflicts with auto and pedestrian circulation. This may include a shared-use path or dedicated bike lanes, built to current National Association of City Transportation Officials (NACTO) standards
- Bicycle parking should be placed in close proximity to the station platforms. Access to the bicycle parking should not impede primary paths of pedestrian travel

Pick-up/Drop-off Facilities

- Pick-up/drop-off facilities should be placed with convenient access to station platforms, although not closer than bus facilities
- Pick-up/drop-off facilities should be located in a place that minimizes auto-pedestrian conflicts along the path of travel
- Additional space for pick-up/drop-off facilities beyond the minimum required should be identified to account for future changes in technology or transportation access patterns, such as driverless vehicles and autonomous shuttles
- Traffic and queuing associated with pick-up/drop-off facilities should not affect the flow of buses

Parking Facilities

- Parking facilities should be configured in a way to allow for shared use with other on-site land uses, particularly those with parking demand peaks outside of typical weekday work hours
- A path of pedestrian travel should be provided between parking facilities and the platforms, minimizing conflicts with auto movements

Other Facilities

- Parking for station maintenance and operations vehicles should be provided close to the platforms and station facilities
- Bus operator facilities, such as restrooms, should be distinct from publicly accessible facilities
- Public plazas should be readily visible from access facilities and along primary paths of travel

Site Layout

Kimley-Horn has developed an example site layout that both accommodates the station facility sizing requirements described above and provides a visual representation of the site access considerations noted above to provide for an integrated land use-transit experience at a Newark Station. The guiding principles for this layout include:

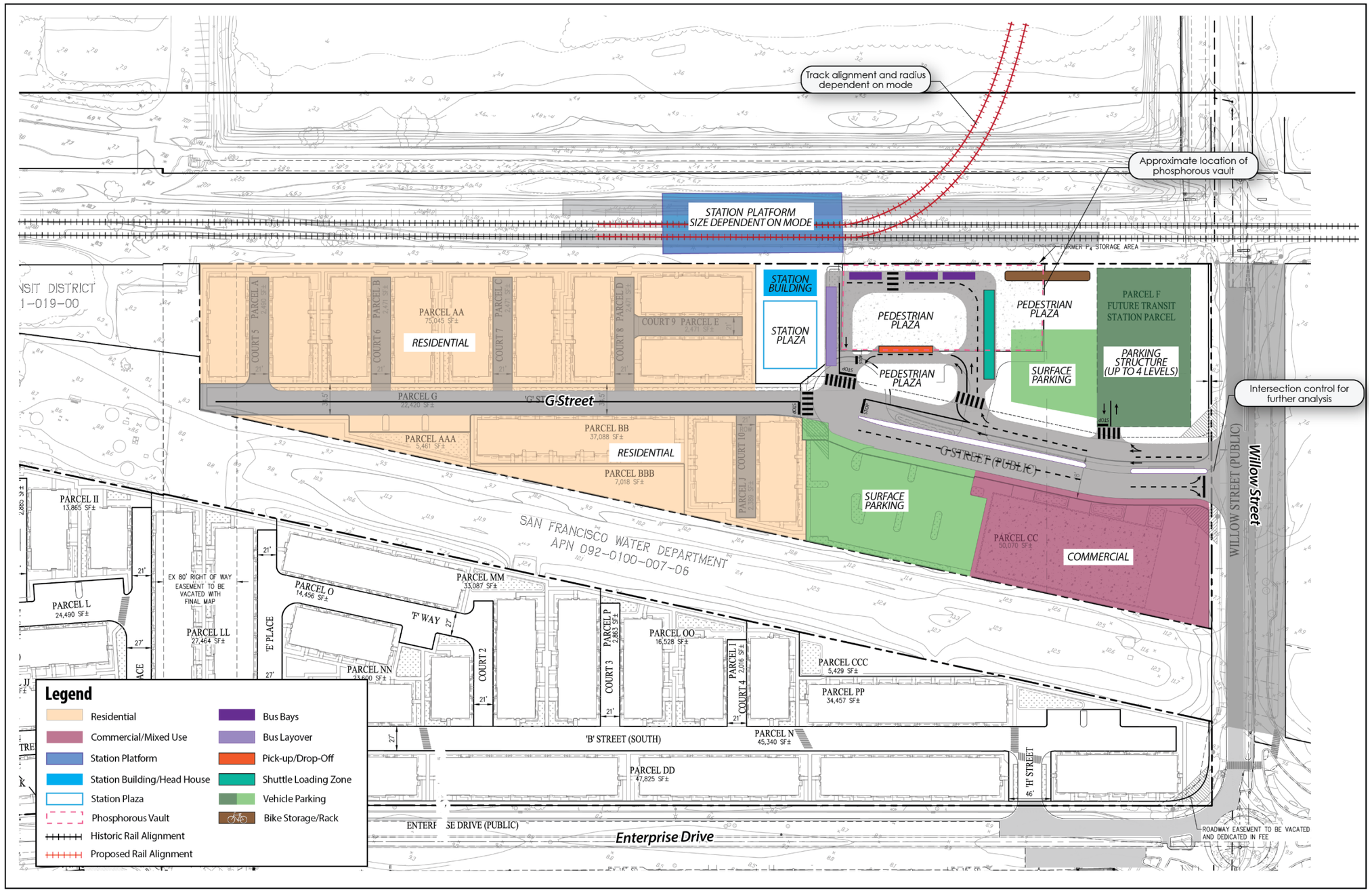
- **Provide a station facility that aligns with the latest DRC track alignments:** the latest DRC alignments prepared by CBTP show the transit alignment turning sharply to the north to eventually connect to Thornton Avenue just west of Willow Street. To accommodate this track radius, station platforms would need to be located several hundred feet to the west of Willow Street.
- **Locate the transit and passenger pick-up/drop-off both as close to the platforms and to Willow Street as possible:** locating transit and passenger loading on the east side of the station platforms and closer to Willow Street will minimize the number of vehicles that have to travel through the site and pass residential units, as well as transit travel time
- **Locate the parking so it is convenient to the transit center and the retail:** locating the parking structure between the transit center and the retail buildings that front Willow Street will allow the parking to be shared between these uses and could minimize the total supply required
- **Move the commercial retail buildings closer to Willow Street and avoid the underground phosphorous vaults:** moving the retail buildings closer to Willow Street will help free up the layout of the parking and station elements to avoid the underground phosphorous vaults and potential environmental issues

Figure 7 presents an example site layout that incorporates the latest revision to the FMC Willow site plan from June 22, 2022 with the station facility sizing recommendations and the guiding principles listed above. This layout incorporates a station location further west along the DRC alignment than what was previously shown to accommodate the sharp north turn of the DRC alignment towards Thornton Avenue.

The station building and plaza are located directly south of the platforms and border the residential parcels to the west. The transit access area has three bus bays and a layover area located on a transit-only inner roadway that allows buses to circulate through the station area. A separate passenger “kiss-and-ride” pick-up/drop-off curb is located on an outer roadway along with a pedestrian plaza. A surface parking lot and parking structure are located between the station and Willow Street with a shared access from G Street.

The FMC Willow site plan has identified one commercial/mixed-use building south of G Street and fronting Willow Street with a surface parking lot adjacent and to the west. The parking structure and other station structures are placed to avoid conflicts with an existing concrete lined phosphorous vault located south of the DRC corridor, north of G Street. It is emphasized that this is just one example site layout and alternative configurations may achieve all the station facility sizing requirements and station access considerations.

Figure 7: Proposed Station Area Layout



The station layout includes the following:

- The total space allocated for the transit center facilities and the parking structure is 1.8 acres.
- G Street is a four-lane road from Willow Street until station traffic turns into the transit station area
- The parking structure is up to four levels with up to 600 parking spaces, depending on future demand, and can accommodate both transit PNR demand and demand associated with the commercial uses.
- A small surface parking lot is located to the west of the parking structure to allow for additional parking space if necessary; the lot can also provide flexible space for either expanding pick-up/drop-off space and/or mobility hub features, which can contain a range of first/last-mile transportation options such as bikeshare, scooters, carshare, and other technology-enabled mobility services
- A one-way counterclockwise circulation road provides station access to buses, private shuttles, and passenger pick-up/drop-off. Buses and passenger pick-up/drop-off occur in separate lanes to minimize bus and private vehicle conflicts. There is space for three bus bays plus separate space for bus layover, 150 feet for shuttles, and 150 feet for TNC, taxi, and KNR pick-up/drop-off.

Project Phasing

The implementation of a transit service along the DRC, including construction of a Newark Station, is likely to occur years after completion of the FMC Willow site development. The DRC project is still in early planning phases and funding for completion of planning, engineering, and construction has not yet been identified. The ridership and station sizing needs identified in this memo are for a DRC transit system at maturity and thus may not reflect demand at project opening. However, there are several recommended actions that the City and the FMC Willow site development team can adopt to facilitate developing a successful multimodal transit center at a proposed Newark Station when the DRC project is constructed. There are four phases envisioned for implementation of the transit facilities at the FMC Willow development:

- Phase 1: FMC Willow development is constructed, but DRC project has not yet begun construction
- Phase 2: FMC Willow development is constructed and DRC project is under construction/begins operation
- Phase 3: FMC Willow development is constructed and DRC reaches ridership maturity

This memo identifies approaches to the station facilities during each of these anticipated phases. These actions are summarized below:

- <u>Phase 1: FMC Willow development is constructed, but DRC project has not yet begun construction</u>
    - Space for the transit facilities described above should be reserved as the rest of the site's residential and commercial buildings are developed.
    - The bus transit center located inside the FMC Willow site is not beneficial until service is provided along the DRC. Until the transit station is built, the site should construct and maintain on-street AC Transit bus stops on Willow Street.
    - The block containing the station buildings and plaza and the circulating road around the block with the future bus bays and pick-up/drop-off facilities can be built with the development but repurposed as a pedestrian space.

  - It is not recommended to develop a park, permanent buildings, or other community amenities on this block as it could be difficult and/or costly to repurpose this space when a Newark Station is developed.
  - Prospective residents of the FMC Willow development should be made aware of the configuration of future transit station facilities and the anticipated noise and traffic effects of DRC and station construction.
  - The interim configuration proposed as part of the FMC Willow development is consistent with the recommendations identified for this phase
- Phase 2: FMC Willow development is constructed and DRC project is under construction/begins operation
  - Further DRC project analysis will determine whether and when a parking structure will be needed to serve station ridership. It may be appropriate to postpone parking structure construction to limit project costs and minimize construction impacts.
- Phase 3: FMC Willow development is constructed and DRC reaches ridership maturity
  - Should the parking structure not be constructed concurrent with DRC project construction, there will be interim parking impacts during construction of the structure with an operational station. Further analysis will be needed to determine potential temporary parking solutions during construction should the parking structure construction be delayed until after DRC service begins.

May 23, 2022
Job No.: 2674-010

BAYVIEW SPECIFIC PLAN AREA
UNIT ALLOCATION TABLE
ORIGINAL SPECIFIC PLAN TABLE
NEWARK, CALIFORNIA

PROPERTY OWNER	PROJECT NAME / DESCRIPTION	ASSESSOR'S PARCEL NUMBER	PARCEL AREA ZONED FOR RESIDENTIAL USE	LAND USE DESIGNATION / ZONING	MAXIMUM NUMBER OF UNITS	PERCENTAGE OF TOTAL
Ashland, Inc.	Compass Bay Tract 8459	092-0115-005	10.29 Acres	MHDR	243	9.72%
Cargill	Bridgeway Tracts 8099 & 8436	Parcel 1 of Parcel Map 9837[1]	54.53 Acres	LDR / MDR / MHDR	652	26.08%
Enterprise Drive, LLC.	Future Project, Vacant Land	092-0140-006	2.14 Acres	MDR	35	1.40%
FMC Corporation		092-0100-004-02	3.59 Acres	MHDR	50	1.98%
	FMC Willow Tract 8559	092-0100-005	0 Acres	COMMERCIAL/TRANSIT	0	0.00%
	Future Project, Vacant Land	092-0101-001	2.22 Acres	MDR	31	1.23%
	Future Project, Vacant Land	092-0115-011	1.98 Acres	MHDR	47	1.89%
	Harbor Pointe Tract 8453 & FMC Willow Tract 8559	537-0852-001-02	5.80 Acres	PARK/COMMERCIAL/HDR	246	9.85%
		537-0852-002-07	0 Acres	PARK / COMMERCIAL	0	0%
		537-0852-002-008	9.60 Acres	MHDR / PARK	173	6.93%
Gallade Enterprises, LLC.	Gallade Park	092-0140-005	0 Acres	PARK	0	0%
Jones Hamilton, Company	Glass Bay Tract 8098	092-0116-058	6.23 Acres	MDR	86	3.44%
		092-0116-059	5.92 Acres	MDR	82	3.27%
		092-0116-060	9.12 Acres	MDR	126	5.04%
SHH, LLC.	Light House Tract 8157	092-0115-012	2.0 Acres	MHDR	48	1.91%
		092-0115-013	4.11 Acres	MHDR	98	3.92%
Torian	Bayshores Tract 8085, 8310 & 8311	092-0115-008	10.0 Acres	MDR / MHDR	138	5.53%
		092-0115-010	32.22 Acres	LDR / MDR / MHDR	445	17.81%
TOTAL			**159.76 Acres**		**2,500**	**100%**

1. Acreages listed are estimates.
2. On May 25, 2010, Cargill recorded Parcel Map 9837 with the Alameda County, California Recorder's Office, creating three new legal parcels. The County Assessor has not yet updated its Assessor's Parcel Numbers assigned to the land which was the subject of the Parcel Map, so the allocation of units in Table 2.2 Refers to Parcel 1 of Parcel Map 9837 rather than by APN.

May 23, 2022
Job No.: 2674-010

BAYVIEW SPECIFIC PLAN AREA
UNIT ALLOCATION TABLE
CHANGES TO DATE
NEWARK, CALIFORNIA

PROPERTY OWNER	PROJECT NAME / DESCRIPTION	ASSESSOR'S PARCEL NUMBER	SPECIFIC PLAN				ENTITLED			
			PARCEL AREA ZONED FOR RESIDENTIAL USE	LAND USE DESIGNATION / ZONING	MAXIMUM NUMBER OF UNITS	PERCENTAGE OF TOTAL	PARCEL AREA ZONED FOR RESIDENTIAL USE	LAND USE DESIGNATION / ZONING	NUMBER OF UNITS	PERCENTAGE OF TOTAL
Ashland, Inc.	Compass Bay Tract 8459	092-0115-005	10.29 Acres	MHDR	243	9.72%	10.0 Acres	MDR	138	7.55%
Cargill	Bridgeway Tracts 8099 & 8436	Parcel 1 of Parcel Map 9837	54.53 Acres	LDR / MDR / MHDR	652	26.08%	38.2 Acres	MDR / MHDR / PARK	576	31.51%
Enterprise Drive, LLC.	Future Project, Vacant Land	092-0140-006	2.14 Acres	MDR	35	1.40%	**NOT YET DEVELOPED**			
FMC Corporation		092-0100-004-02	3.59 Acres	MHDR	50	1.98%				
	Future Project, Vacant Land	092-0101-001	2.22 Acres	MDR	31	1.23%				
	Future Project, Vacant Land	092-0115-011	1.98 Acres	MHDR	47	1.89%				
	Future FMC Willow Tract 8559	092-0100-005	0 Acres	COMMERCIAL / TRANSIT	0	0.00%				
		537-0852-001-08	5.80 Acres	PARK / COMMERCIAL / HDR	246	9.85%				
		537-0852-002-09	0 Acres	PARK / COMMERCIAL	0	0.00%				
	Harbor Pointe Tract 8453	537-0852-001-03	0 Acres	PARK	0	0%	14.9 Acres	MDR / PARK	192	10.50%
		537-0852-002-16	9.60 Acres	MHDR / PARK / COMMERCIAL	173	6.93%				
Gallade Enterprises, LLC.	Gallade Park	092-0140-005	0 Acres	PARK	0	0%	0 Acres	PARK	0	0.00%
Jones Hamilton, Company	Glass Bay Tract 8098	092-0116-058	6.23 Acres	MDR	86	3.44%	21.3 Acres	MDR	217	11.87%
		092-0116-059	5.92 Acres	MDR	82	3.27%				
		092-0116-060	9.12 Acres	MDR	126	5.04%				
SHH, LLC.	Light House Tract 8157	092-0115-012	2.0 Acres	MHDR	48	1.91%	4.6 Acres	MDR	163	8.92%
		092-0115-013	4.11 Acres	MHDR	98	3.92%				
Torian	Bayshores Tract 8085, 8310 & 8311	092-0115-008	10.0 Acres	MDR / MHDR	138	5.53%	34.9 Acres	MDR	542	29.65%
		092-0115-010	32.22 Acres	LDR / MDR / MHDR	445	17.81%				
TOTAL			**159.76 Acres**		**2,500**	**100%**	**123.9 Acres**		**1,828**	**100%**

1. Acreages listed are estimates.
2. On May 25, 2010, Cargill recorded Parcel Map 9837 with the Alameda County, California Recorder's Office, creating three new legal parcels. The County Assessor has not yet updated its Assessor's Parcel Numbers assigned to the land which was the subject of the Parcel Map, so the allocation of units in Table 2.2 Refers to Parcel 1 of Parcel Map 9837 rather than by APN.

May 23, 2022
Job No.: 2674-010

BAYVIEW SPECIFIC PLAN AREA
UNIT ALLOCATION TABLE
CHANGES TO DATE WITH FMC WILLOW
NEWARK, CALIFORNIA

PROPERTY OWNER	PROJECT NAME / DESCRIPTION	ASSESSOR'S PARCEL NUMBER	SPECIFIC PLAN				ENTITLED			
			PARCEL AREA ZONED FOR RESIDENTIAL USE	LAND USE DESIGNATION / ZONING	MAXIMUM NUMBER OF UNITS	PERCENTAGE OF TOTAL	PARCEL AREA ZONED FOR RESIDENTIAL USE	LAND USE DESIGNATION / ZONING	NUMBER OF UNITS	PERCENTAGE OF TOTAL
Ashland, Inc.	Compass Bay Tract 8459	092-0115-005	10.29 Acres	MHDR	243	9.72%	10.0 Acres	MDR	138	6.28%
Cargill	Bridgeway Tracts 8099 & 8436	Parcel 1 of Parcel Map 9837	54.53 Acres	LDR / MDR / MHDR	652	26.08%	38.2 Acres	MDR / MHDR / PARK	576	26.21%
Enterprise Drive, LLC.	Future Project, Vacant Land	092-0140-006	2.14 Acres	MDR	35	1.40%	NOT YET DEVELOPED			
FMC Corporation		092-0100-004-02	3.59 Acres	MHDR	50	1.98%				
	Future Project, Vacant Land	092-0101-001	2.22 Acres	MDR	31	1.23%				
	Future Project, Vacant Land	092-0115-011	1.98 Acres	MHDR	47	1.89%				
	Future FMC Willow Tract 8559	092-0100-005	0 Acres	COMMERCIAL / TRANSIT	0	0.00%	15.3 Acres[3]	MHDR / PARK / COMMERCIAL	370	16.83%
		537-0852-001-08	5.80 Acres	PARK / COMMERCIAL / HDR	246	9.85%				
		537-0852-002-09	0 Acres	PARK / COMMERCIAL	0	0.00%				
	Harbor Pointe Tract 8453	537-0852-001-03	0 Acres	PARK	0	0%	14.9 Acres	MDR / PARK	192	8.74%
		537-0852-002-16	9.60 Acres	MHDR / PARK / COMMERCIAL	173	6.93%				
Gallade Enterprises, LLC.	Gallade Park	092-0140-005	0 Acres	PARK	0	0%	0 Acres	PARK	0	0.00%
Jones Hamilton, Company	Glass Bay Tract 8098	092-0116-058	6.23 Acres	MDR	86	3.44%	21.3 Acres	MDR	217	9.87%
		092-0116-059	5.92 Acres	MDR	82	3.27%				
		092-0116-060	9.12 Acres	MDR	126	5.04%				
SHH, LLC.	Light House Tract 8157	092-0115-012	2.0 Acres	MHDR	48	1.91%	4.6 Acres	MDR	163	7.42%
		092-0115-013	4.11 Acres	MHDR	98	3.92%				
Torian	Bayshores Tract 8085, 8310 & 8311	092-0115-008	10.0 Acres	MDR / MHDR	138	5.53%	34.9 Acres	MDR	542	24.66%
		092-0115-010	32.22 Acres	LDR / MDR / MHDR	445	17.81%				
TOTAL			**159.76 Acres**		**2,500**	**100%**	**123.9 Acres**		**2,198**	**100%**

1. Acreages listed are estimates.
2. On May 25, 2010, Cargill recorded Parcel Map 9837 with the Alameda County, California Recorder's Office, creating three new legal parcels. The County Assessor has not yet updated its Assessor's Parcel Numbers assigned to the land which was the subject of the Parcel Map, so the allocation of units in Table 2.2 Refers to Parcel 1 of Parcel Map 9837 rather than by APN.
3. The residential acreage within FMC Willow includes the Mixed Use acreage.

RECORDING REQUESTED BY AND WHEN RECORDED MAIL TO:

City Clerk
City of Newark
37101 Newark Boulevard
Newark, CA 94560

No recording fee pursuant to Government Code Section 27383

APN: _____ SPACE ABOVE THIS LINE FOR RECORDER'S USE

COMMUNITY FINANCING AGREEMENT BY AND BETWEEN THE CITY OF NEWARK AND LENNAR HOMES OF CALIFORNIA, LLC, REGARDING PROVISION OF CERTAIN PUBLIC FACILITIES AND SERVICES FOR THE DUMBARTON TOD PROJECT SPECIFIC PLAN

This Community Financing Agreement (this "**Agreement**"), dated _____, 2022, (the "**Effective Date**") is entered into by and between the City of Newark, a California municipal corporation (hereinafter "**City**") and Lennar Homes of California, LLC, a California limited liability company (**"Developer")**. City and Developer are, from time to time, hereinafter referred to individually as a "**Party**" and collectively as the "**Parties**." This Agreement is entered into on the basis of the following facts, understandings and intentions of the Parties.

RECITALS

A. In September, 2011, the City Council adopted the Dumbarton Transit Oriented Development ("**TOD**") Specific Plan ("**Specific Plan**"). The real property that is the subject of this Agreement is a portion of the approximately 205-acre Specific Plan area, which is depicted on **Exhibit A** to this Agreement ("**Specific Plan Property**"), excluding certain governmental property located therein.

B. Developer is the owner of that certain parcel known as the Willow Parcel, as more particularly depicted and legally described on **Exhibit B** to this Agreement and is referred to herein as "**Property**."

C. It is the intent of the City, through the Specific Plan, to provide a comprehensive, long-term plan that guides future development of the Specific Plan Property in concert with and in response to the needs of the marketplace. The Specific Plan establishes a policy and a regulatory framework to guide future development, including allowable land uses, development regulations, design guidelines, necessary infrastructure improvements, and an implementation plan to direct future development of the Specific Plan Property.

D. In accordance with the California Environmental Quality Act (Pub. Res. Code Sections 21000 *et seq.*) and its Guidelines (C.C.R., Title 14 Sections 15000, *et seq.*), as each is

amended from time to time ("**CEQA**") (defined herein), City certified as adequate and complete an Environmental Impact Report ("**EIR**") for the Specific Plan, and the development envisioned within the Specific Plan.

E. The various property owners within the Specific Plan Property may propose to plan, develop, construct, operate and maintain a mix of residential, commercial, entertainment, retail, office, recreation and related uses and structures on the Specific Plan Property, as more particularly described in the EIR (each, a "**TOD Project**").

NOW, THEREFORE, in consideration of the mutual covenants and promises contained herein and other consideration, the value, legality, and adequacy of which is hereby acknowledged, the Parties hereby agree as follows:

1.01 Developer Obligations In order to implement the Specific Plan and to contribute to the provision of appropriate public improvements and services, the Developer hereby agrees to make the following contributions to the City related to Developer's planned TOD Project:

(1) Developer has agreed to contribute toward the estimated costs of the anticipated TOD Project-wide improvements, including the City's planning, design, right of way acquisition and construction of the Central Avenue Railroad Overcrossing. Developer's contribution shall be payable in immediately available funds by Developer to the City at the time of, or prior to, the issuance of each building permit for development of any new market rate residential units on the Property, at the rate and in the fixed amount of Two Thousand Five Hundred Dollars ($2,500.00) per dwelling unit (without adjustment).

(2) Developer hereby consents to the imposition, creation, or funding of a duly-established financing district (including but not limited to a Communities Facilities District pursuant to the Mello Act) on the Property to fund services or facilities, or shall arrange for an alternative permanent annuity to provide equivalent revenue. The maximum amount of the assessment, special tax, or annuity shall not exceed Two Hundred Twenty Dollars ($220.00) per year per market rate residential housing unit, which amount will be adjusted annually to reflect inflation, as measured by the Consumer Price Index for All Urban Consumers (CPI-U) and reported for the United States Bureau of Labor Statistics Cost of Living Index for the San Francisco-Oakland-Hayward Area.

1.02 Amendments of this Agreement.

This Agreement may be amended from time to time only upon the unanimous written consent of City and Developer.

1.03 Construction. As used in this Agreement, and as the context may require, the singular includes the plural and vice versa, and the masculine gender includes the feminine and neuter and vice versa.

1.04 Recordation. The Clerk of the City shall record, within ten (10) days after the Effective Date, a copy of this Agreement in the Official Records of the Recorder's Office of Alameda County. Developer shall be responsible for all recordation fees, if any.

1.05 Governing Law. The interpretation, validity, and enforcement of the Agreement shall be governed by and construed under the laws of the State of California.

1.06 Entire Agreement. This Agreement may be executed in multiple originals, each of which is deemed to be an original. This Agreement, including these pages and all the exhibits (set forth below) inclusive, and all documents incorporated by reference herein, constitute the entire understanding and agreement of the Parties.

1.07 Signatures. The individuals executing this Agreement represent and warrant that they have the right, power, legal capacity, and authority to enter into and to execute this Agreement on behalf of the respective legal entities of Developer and City. This Agreement shall inure to the benefit of and be binding upon the Parties hereto and their respective successors and assigns.

1.08 Successors. This Agreement is intended to run with the land and bind Developer's successors-in-interest in the Property. Upon transfer, any success-in-interest shall be deemed to have accepted the terms and conditions of this Agreement and shall be deemed the "Developer" and any transferring Developer shall be released under this Agreement for any obligations arising after the date of transfer.

1.09 Exhibits. The following exhibits are attached to this Agreement and are hereby incorporated herein by this reference for all purposes as if set forth herein in full:

Exhibit A Depiction of Specific Plan Property

Exhibit B Legal Description of the Willow Parcel.

[Remainder of Page Intentionally Left Blank]

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first hereinabove written.

"City":

CITY OF NEWARK,
a municipal corporation

By: _____
Alan L. Nagy, Mayor City of Newark

"Developer":

LENNAR HOMES OF CALIFORNIA, LLC,
a California limited liablity company

By: _____
Name: _____
Its:

Exhibit A

Depiction of

205-acre Dumbarton TOD Specific Plan area

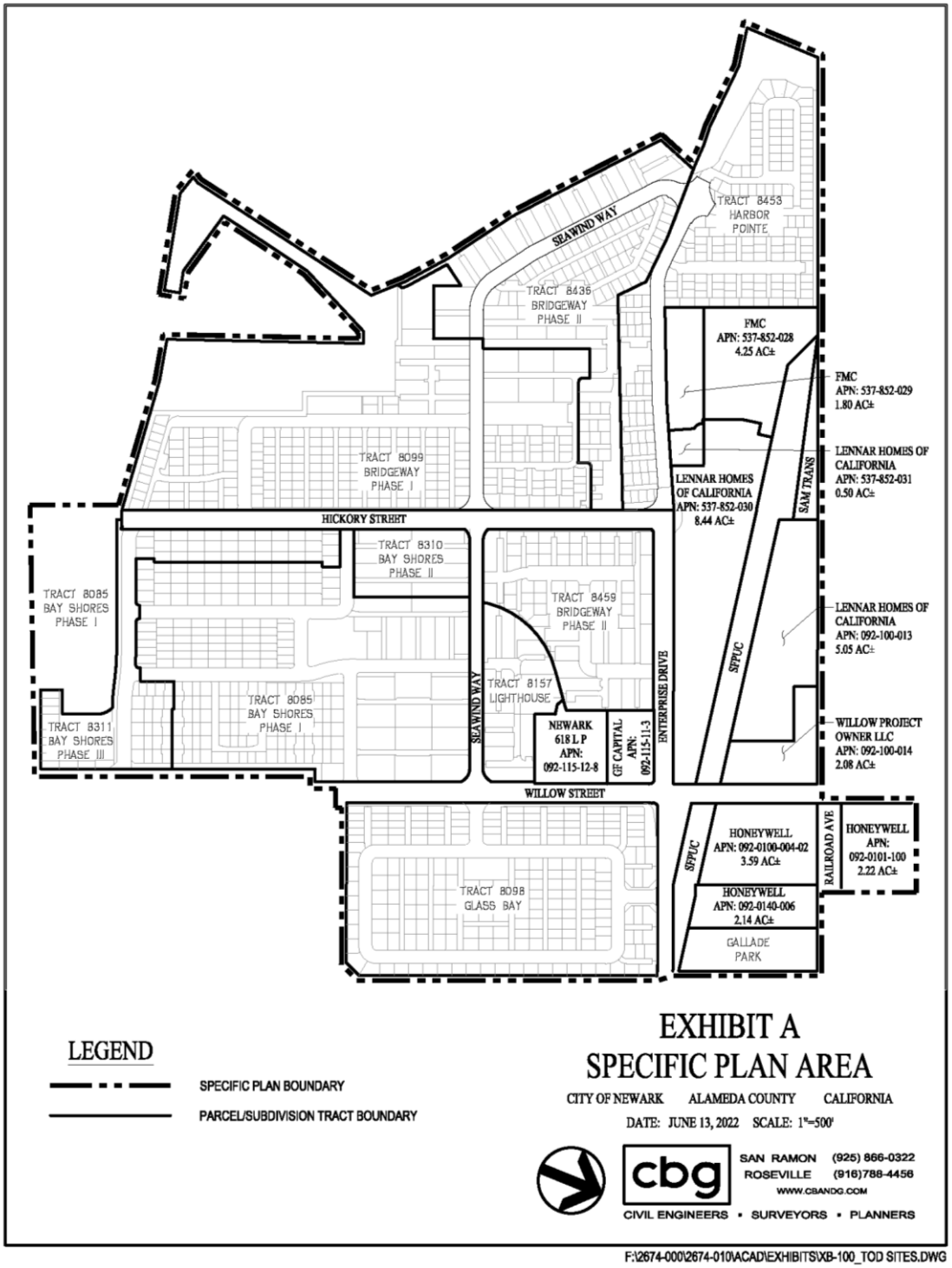


Exhibit B

Legal Description of Willow Parcel(s)

REAL PROPERTY SITUATE IN THE CITY OF NEWARK, COUNTY OF ALAMEDA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING ALL OF PARCEL 1 AS SAID PARCEL IS SHOWN AND SO DESIGNATED ON PARCEL MAP 11072, RECORDED DECEMBER 11, 2020 AND FILED IN BOOK 348 OF MAPS, AT PAGE 32 IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY.

TOGETHER WITH:

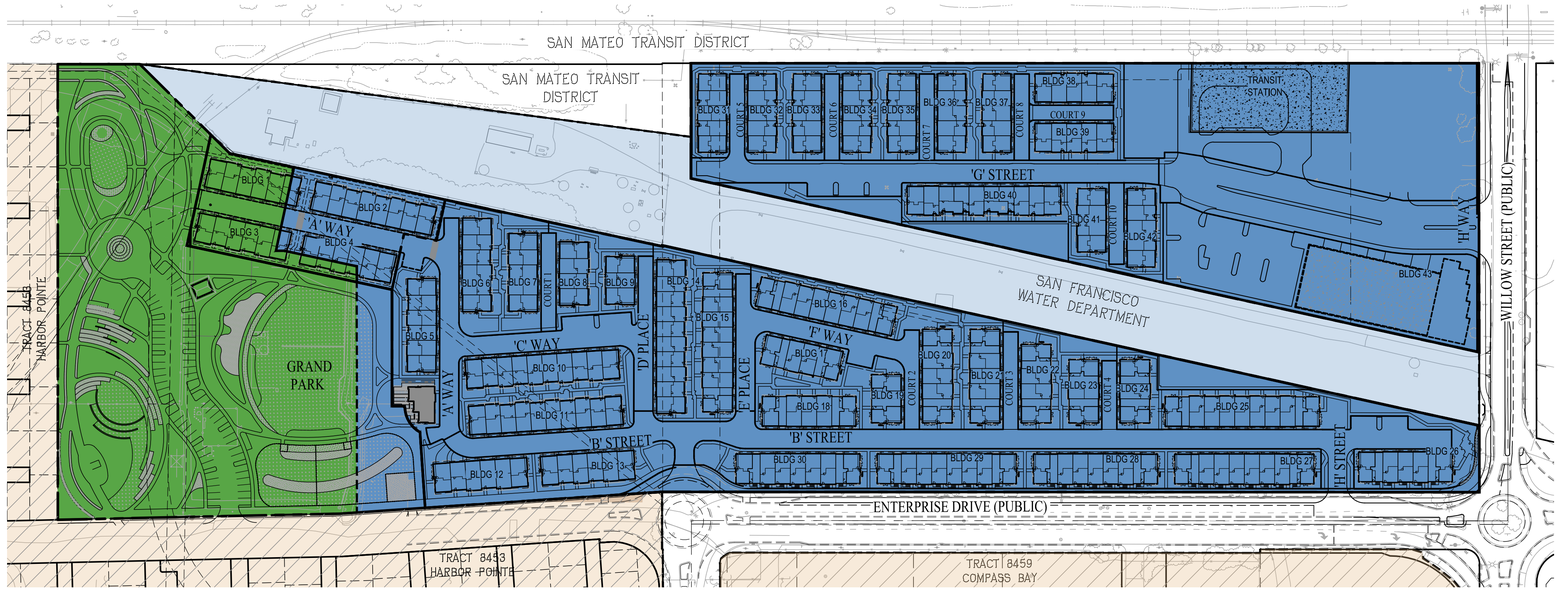
THE 20 FOOT WIDE PRIVATE ACCESS EASEMENT (PAE) OVER PARCEL 2 AS SHOWN AND SO DELINEATED ON PARCEL MAP 11072, RECORDED DECEMBER 11, 2020 AND FILED IN BOOK 348 OF MAPS, AT PAGE 32 IN THE OFFICE OF THE COUNTY RECORDED OF ALAMEDA COUNTY.

ALSO TOGETHER WITH:

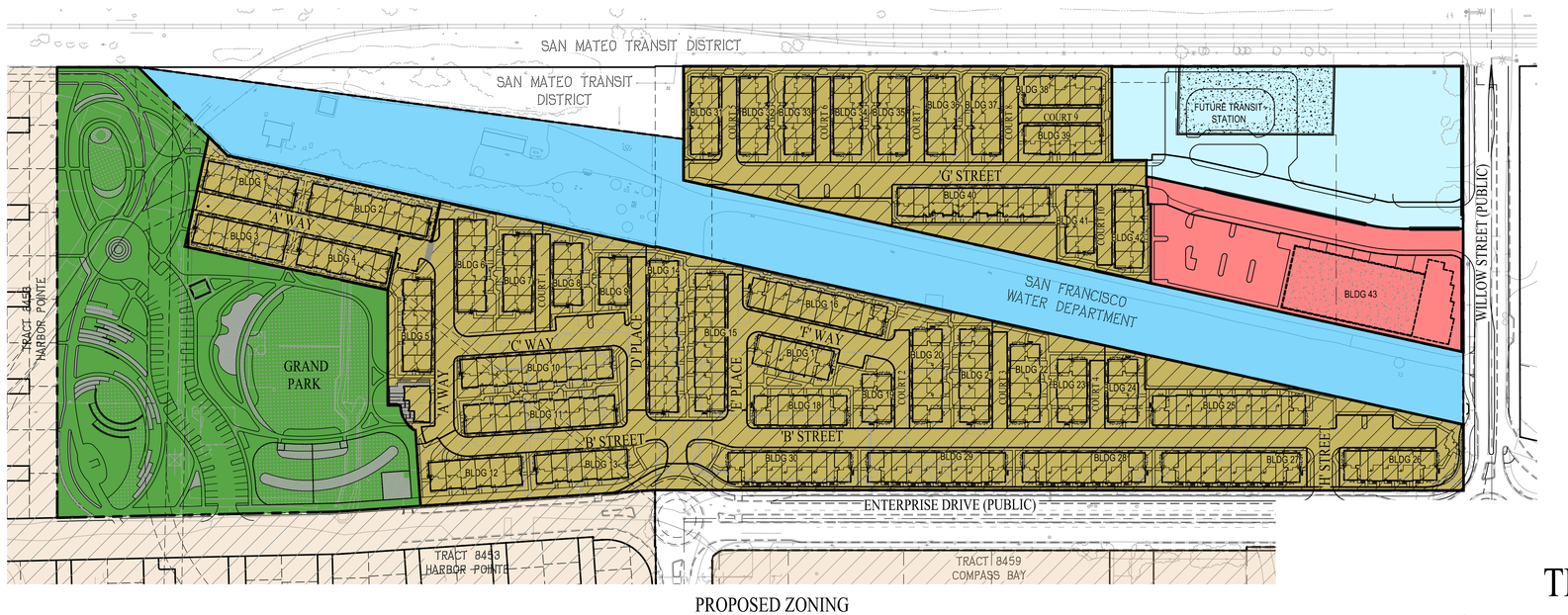
BEING ALL OF PARCEL 2 AS SAID PARCEL IS SHOWN AND SO DESIGNATED ON PARCEL MAP 11071, RECORDED DECEMBER 11, 2020 AND FILED IN BOOK 348 OF MAPS, AT PAGE 34 IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY.

CONTAINING 13.99 ACRES OF LAND, MORE OR LESS.

END DESCRIPTION



CURRENT APPROVED ZONING



PROPOSED ZONING

ZONING AMENDMENT SUMMARY

ZONING DISTRICT	CURRENT ZONING	PROPOSED ZONING	PROPOSED ZONING CHANGE
RESIDENTIAL MEDIUM DENSITY WITH FORM BASED CODE (RM)	0.00 AC	13.35 AC±	13.35 AC±
COMMERCIAL MIXED USE WITH FORM BASED CODE (CMU-FBC)	0.00 AC	1.60 AC±	1.60 AC±
BUSINESS TECHNOLOGY PARK (BTP)	17.10 AC±	0.00 AC	(17.10) AC±
TRANSIT STATION (TS)	0.00 AC	2.10 AC±	2.10 AC±
PARK (PK)	5.00 AC±	5.05 AC±	0.05 AC±
TOTAL	**22.1 AC±**	**22.1 AC±**	**0.0 AC**

LEGEND

- RESIDENTIAL MEDIUM DENSITY WITH FORM BASED CODE (RM)
- COMMERCIAL MIXED USE WITH FORM BASED CODE (CMU-FBC)
- PARKS (PF)
- BUSINESS AND TECHNOLOGY PARK (BTP)
- PUBLIC FACILITIES (PF)
- TRANSIT STATION (TS)

TRACT 8559
ZONING CHANGES
FMC WILLOW

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

SCALE: 1"=100' DATE: JULY 5, 2022

0 100 200 300

cbg CIVIL ENGINEERS ▪ SURVEYORS ▪ PLANNERS
SAN RAMON ▪ (925) 866-0322
SACRAMENTO ▪ (916) 375-1877
WWW.CBANDG.COM

F:\2674-000\2674-010\ACAD\EXHIBITS\XB-076_ZONING AMENDMENT OVERLAY.DWG

STATION PARCEL AND PARKING EASEMENT DEDICATION AGREEMENT

THIS STATION PARCEL AND PARKING EASEMENT DEDICATION AGREEMENT (this "**Agreement**") is dated as of _____, 2022 for reference purposes only, by and among LENNAR HOMES OF CALIFORNIA, LLC, a California limited liability company ("**Builder**"), THE WILLOW PROJECT OWNER, LLC, a Delaware limited liability company ("**TWPO**"), and the CITY OF NEWARK ("**City**"), a California municipal corporation (collectively, the "**Parties**" and individually, a "**Party**").

R E C I T A L S

A. In September, 2011, the City Council adopted the Dumbarton Transit Oriented Development ("**TOD**") Specific Plan ("**Specific Plan**"). The real property described below is within the approximately 205-acre Specific Plan area.

B. One of the elements of the Specific Plan is the accommodation of a future Transit Station to serve the region as well as local residents. The Specific Plan's Exhibit 2.1 (Conceptual Illustrative Plan Only) conceived of a location for the Transit Station near the rail corridor along the Specific Plan's northern boundary.

C. This Agreement facilitates the actualization of the Transit Station by Builder and TWPO offering for dedication the land for such a possible future Transit Station. Because the City does not have a final plan for the Transit Station and the process for approval of such a facility would include approval for providing service from regional agencies, City may not proceed with constructing the future Transit Station for some time, if ever.

D. Builder is the legal owner of a fee interest in certain real property located in the City of Newark, County of Alameda, State of California, as described on **Exhibit A-1** attached hereto (the "**Builder Property**"). TWPO is the legal owner of a fee interest in certain real property located in the City of Newark, County of Alameda, State of California, as described on **Exhibit A-2** attached hereto (the "**TWPO Property**"). The real property described in **Exhibit A-3** and depicted in **Exhibit A-4** is the "**Station Parcel**" consisting of approximately one and 61/100 (1.61) acres of land to be dedicated in fee pursuant to terms of this Agreement. In addition, TWPO will grant an easement (the "**Parking Easement**") over a portion of the TWPO Property described on **Exhibit A-5** as the "**Parking Easement Area**." The Station Parcel is composed of real property partially within the Builder Property and the TWPO Property.

E. In connection with the development of Builder's project, which is adjacent to the Station Parcel (the "**Willow Project**"), Builder and TWPO have agreed to dedicate to the City, and City has agreed to accept a dedication of, the Station Parcel for the possible future development of a commuter rail station, consistent with the goals and principles of the Dumbarton TOD Specific Plan, as it may be amended from time to time. The Willow Project application seeks entitlements consisting of a general plan amendment, a specific plan amendment, a zoning map amendment, a design review and a vesting tentative map (Tract Map No. 8559). Builder and TWPO are jointly processing a vesting tentative map and other entitlements for the Builder Property and the TWPO

Property. As set forth more fully below, Builder and TWPO have included and will include in the vesting tentative map and, if approved, the final map a separate legal lot creating the Station Parcel.

F. It is the intention of the Parties to (i) set forth the terms and conditions on which the Station Parcel shall be dedicated to the City, and (ii) identify which Party shall be responsible for the design and installation of certain interim improvements, upon certain terms and conditions as set forth hereinbelow.

G. Builder will install the Interim Improvements, as defined hereinbelow, at Builder's sole cost. Builder will not be responsible for any cost of the design and construction of any future Transit Station on the Station Parcel.

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, the Parties hereby agree as follows:

1. Definitions. Terms are defined as stated herein.

2. Irrevocable Offer of Dedication of Station Parcel and Parking Easement.

2.1 After execution of this Agreement and prior to recordation of the Final Map for the Willow Project, Builder and TWPO shall deliver to City a fully-executed and notarized irrevocable offer of dedication for the Station Parcel and the Parking Easement in the form set forth on **Exhibit B** attached hereto ("**IOD**") offering the Station Parcel in fee and an easement over the Parking Easement Area to the City. The IOD shall also provide that TWPO reserves to itself and its successors an access easement to the Parking License Area also as depicted on **Exhibit A-5,** or as agreed to by the City and the fee owner of the Parking License Area**.** The City shall record the IOD against the Station Parcel and Parking Easement Area concurrent with recordation of Final Map. The City shall deliver copies of the recorded IOD to Builder and TWPO promptly after recordation.

2.2 The Parties understand and agree that the City in no way accepts responsibility for or liability associated with any contaminated soil, groundwater, or other hazardous materials (collectively, "**Hazards**") located in, upon, or under the Parking Easement Area. The Parking Easement Area has been remediated of Hazards pursuant to San Francisco Bay Regional Water Quality Control Board ("**RWQCB**") orders and as further described in the FMC Risk Management Plan dated August 1, 2019 and FMC FormerP4 Storage Area Remedy Enhancement Completion Report dated March 31, 2020. The remediation of the area includes, but it not limited to, an engineered asphalt cap (the "**P4 Cap**"). The Parking Easement Area is subject to that certain Covenant and Environmental Restriction on Property recorded on November 19, 2019, as Document No. 2019237198 ("**Covenant**"), and use of the Parking Easement Area as a parking lot and for parking uses is consistent with this Covenant. Acceptance by the City of the Parking Easement is not intended to and does not transfer or otherwise confer any liability related to Hazards to the City, including liability related to remediation, cleanup, maintenance, and exposure.

3. IOD Acceptance; Construction and Use of Interim Improvements.

3.1 IOD Acceptance; Conditions Precedent. The City Council shall accept this IOD ("**IOD Acceptance**") upon the occurrence of both of the following conditions precedent: (a) completion and acceptance of the Interim Improvements by the City Council (as defined herein), and (b) issuance of the final market rate residential Certificate of Occupancy in the Willow Project. The "**Interim Improvements**" means those improvements consisting generally of interim open space with a natural turf surface and split rail boundary fence adjacent to Willow Street and G Street, and an interim surface parking lot, as generally depicted on the attached **Exhibit C**. Notwithstanding the foregoing, the term "**Interim Improvements**" shall be deemed to mean the final interim improvements on the Station Parcel constructed in accordance with the tract improvement plans for the Willow Project as approved by the Public Works Director. As a condition to IOD Acceptance, Builder shall provide a warranty bond for the Interim Improvements in the amount of ten percent (10 %) of the approved engineer's cost estimate for the Interim Improvements for a term of one (1) year.

3.2 The Interim Improvements shall be constructed in accordance with the approved plans for the Interim Improvements and all other applicable laws, rules, regulations, and ordinances of all governmental or quasi-governmental agencies ("**Applicable Law**"). Builder shall be responsible for obtaining any and all required permits and other governmental approvals necessary for the construction and installation of the Interim Improvements. City covenants to use reasonable efforts to review and approve any required permits or approvals within its control in a timely fashion. The improvement plans for the Interim Improvements shall meet the scope and intent of the design approved by the City Council in its approval of the Willow Project, and the cost of designing and constructing any major changes to the approved design shall be at the sole cost and expense of the City.

3.3 Except as provided in the last sentence of Section 3.2, Builder shall be obligated to construct all Interim Improvements at its sole cost and expense. In no event shall City have any responsibility to construct the Interim Improvements or pay the cost thereof, except to the extent provided in Section 3.2.

3.4 Builder shall carry out and shall cause its contractors to carry out the construction of the Interim Improvements in conformity with all applicable federal, state and local laws, rules, ordinances and regulations, including without limitation, all applicable federal and state labor laws and standards, the City zoning and development standards, building, plumbing, mechanical and electrical codes, all other provisions of the City's Municipal Code, all applicable disabled and handicapped access requirements, and any other Applicable Laws.

3.5 As set forth in Section 3 of the IOD, following the IOD Acceptance, the City shall be solely responsible for any demolition of improvements on the Station Parcel and all construction costs of any improvements to the Station Parcel, including but not limited to, construction of a transit station thereon.

4. Covenant to Create Legal Lot. Builder and TWPO have submitted a vesting tentative map application that includes a proposed lot consistent with the Station Parcel (the "**Station Parcel Lot**"). Builder and TWPO shall include the Station Parcel Lot in the first final map submitted to the City. Any deviation between the legal description contained herein of the Station Parcel and

the Station Parcel Lot must be approved in advance of recordation of the final map, which approval may be withheld in the sole and absolute discretion of the City acting by and through the City Manager. This Section 4 shall survive the recordation of the IOD and terminate upon the recordation of the final map containing the Station Parcel Lot or the termination of the IOD, whichever occurs first.

5. Builder's Indemnity.

5.1 Builder agrees to indemnify, defend (with counsel approved by City) and hold the City and its respective elected and appointed officers, officials, employees, agents, consultants, and contractors (collectively, the "**City Indemnitees**") harmless from and against all liability, loss, cost, expense (including without limitation attorneys' fees and costs of litigation), claim, demand, action, suit, judicial or administrative proceeding, penalty, deficiency, fine, order, and damage (all of the foregoing collectively "**Indemnified Claims**") which directly or indirectly, in whole or in part, are caused by, arise in connection with, result from, relate to, or are alleged to be caused by, arise in connection with, or relate to, all claims that may be made by contractors, subcontractors or other third party claimants pursuant to Labor Code Sections 1726 and 1781 or the requirement of competitive bidding the failure to comply with any state or federal labor laws, regulations or standards in connection with this Agreement, whether or not any insurance policies shall have been determined to be applicable to any such Indemnified Claims. Builder's indemnification obligations set forth in this Section shall not apply to the extent of Indemnified Claims arising from the gross negligence or willful misconduct of the City Indemnitees. The provisions of this Section 5.1 shall survive the expiration or earlier termination of this Agreement for a period of one (1) year.

5.2 Until the IOD Acceptance, Builder shall (i) maintain the Station Parcel and Parking Easement Area, including the Interim Improvements, in good order and in a reasonably safe manner, (ii) indemnify, defend (with counsel approved by City) and hold the City harmless from and against all liability, loss, cost, expense (including without limitation attorneys' fees and costs of litigation), claim, demand, action, suit, judicial or administrative proceeding, penalty, deficiency, fine, order, and damage (all of the foregoing collectively "**Property Claims**") which directly or indirectly, in whole or in part, are caused by, arise in connection with, result from, relate to, or are alleged to be caused by, arise in connection with, or relate to the Interim Improvements, the Station Parcel, and the Parking Easement Area, and (iii) maintain liability insurance for such Property Claims and provide that City, and its officers, agents, and employees shall be additional insureds under such policy.

6. Defaults. In the event a Party believes another Party has breached any provision of this Agreement, the non-defaulting Party shall give written notice to the defaulting Party specifying the grounds of the alleged breach. The defaulting Party shall have thirty (30) days to cure the alleged breach or begin cure if the breach cannot be cured within thirty (30) days and shall diligently continue to cure until complete. In the event a breach is not cured within the time provided or fails to diligently continue to cure, the defaulting party shall be deemed in default.

7. Amendment. This Agreement or any portion hereof may be amended or modified, except where otherwise provided in this Agreement, only by the unanimous written affirmative agreement of the Parties.

8. Lender Protection. A breach of any of the terms, covenants, conditions or restrictions of this Agreement shall not defeat or render invalid the lien of any mortgage or deed of trust made in good faith and for value, but each such term, condition, covenant or restriction shall be binding upon and effective against any person who acquires title to any interest in the Station Parcel by foreclosure, trustee's sale or otherwise. Each Party covenants to cause any lender, person or entity with a deed of trust encumbering its property to subordinate such deed of trust to this Agreement.

9. Assignment. Builder and/or TWPO may assign any and all of its rights and obligations with respect to this Agreement, without the prior consent of the other parties, to any subsequent owner of all or any part of the Station Parcel and/or Willow Project, respectively. The assignment shall be in writing in a form reasonably acceptable to the City Attorney and shall provide for the assumption by the assignee of this Agreement. From and after the date of such assignment, the assigning party shall automatically be released from each and every obligation, responsibility, or liability arising thereafter under this Agreement.

10. Termination. Except as provided in Section 5, this Agreement shall automatically terminate upon the City accepting the dedication of the Station Parcel pursuant to the IOD.

11. Successors and Assigns. Subject to Section 10, the covenants, obligations and agreements contained in this Agreement shall be binding upon and inure to the benefit of the Parties and their respective heirs, personal representatives, successors and assigns, successors-in-interest, as the case may be.

12. Notices. All written notices required to be given pursuant to the terms hereof shall be sent by (a) personal delivery, (b) a nationally recognized overnight courier service, or (c) United States first class mail, registered or certified return receipt requested and postage prepaid as expressly provided herein.

All notices shall be addressed as follows:

To City:
City of Newark
37101 Newark Blvd.
Newark, CA 94560
Attn: City Manager

To Builder:
Lennar Homes of California, LLC
Chad Kiltz| VP of Land Acquisitions| Bay Area
2603 Camino Ramon Suite 525
San Ramon, CA 94583

With a copy to:
Lennar Homes of California, LLC
2000 Five Point, Suite 340
Irvine, California 92618
Attn: Laura Mask, Esq.

To TWPO:
The Willow Project Owner, LLC
888 San Clemente, Suite 100
Newport Beach, California 92660

Attn: Evan Knapp/Caren B. Read, Esq.

With a copy to: Rutan & Tucker, LLP
18575 Jamboree Road, 9th Floor
Irvine, California 92612
Attn: Hans Van Ligten, Esq.

The foregoing addresses may be changed by written notice. All notices shall be deemed received upon receipt or the date indicated on any return receipt or other receipt of delivery.

13. Further Assurances. In a timely fashion, each party shall execute and deliver such further instruments, documents or assurances, and take such further action, as shall be reasonably required to carry out the purposes and intent of this Agreement.

14. Entire Agreement. This Agreement contains the entire understanding of the parties and supersedes any and all other written or oral understandings.

15. Authority. Each of the individuals executing this Agreement verifies that each of them has the authority to enter into this Agreement, that the necessary resolutions or other consents have been passed or obtained, and that this Agreement shall be binding on the Parties for whom each of them is signing.

16. No Beneficiaries. No party besides a Party, its permitted successors and assigns has any rights or remedies under this Agreement.

17. Incorporation. The recitals set forth above and exhibits attached hereto and referred to herein are incorporated into this Agreement.

18. Governing Law. This Agreement shall be enforced and interpreted under California's laws and judicial decisions without giving effect to its conflicts of law provisions.

19. Headings. Section headings are for reference purposes only and do not affect this Agreement.

20. Counterparts. This Agreement and any modifications, amendments or supplements thereto may be executed in several counterparts, and all so executed shall constitute one agreement binding on all parties hereto, notwithstanding that all parties are not signatories to the original or the same counterpart. The parties may also deliver executed copies of this Agreement to each other by electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. No party may raise the use of any image transmission device or method or the fact that any signature was transmitted as an image as a defense to the enforcement of this Agreement. At the request of either party, the parties will confirm signatures by signing and delivering an original document.

21. Interpretation. Each Party and its counsel has reviewed and revised this Agreement and any rule of contract interpretation to the effect that ambiguities or uncertainties are to be

interpreted against the drafting party or the party who caused it to exist shall not be employed in the interpretation of this Agreement or any document executed in connection herewith.

22. No Partnership. This Agreement shall not be construed as creating a partnership or joint venture between the Parties or among the Parties and any third party or cause any of them to be responsible in any manner for the other's or any third party's debts or obligations.

23. Severability. If any part of this Agreement is invalid or unenforceable, then the remainder of this Agreement shall remain valid and enforceable and in force and effect.

24. No Waiver. A waiver by any Party of a default by another Party is only effective against a Party that waives such default in writing and shall not be construed as a waiver of any other default.

[signatures follow on next page]

LENNAR HOMES OF CALIFORNIA, LLC, a California limited liability company

By: _____
Name: _____
Title: _____

THE WILLOW PROJECT OWNER, LLC,
a Delaware limited liability company

By: KPMW Integral, LLC,
a California limited liability company,
its Managing Member

By: _____
Name: _____
Title: _____

[signatures continue on following page]

CITY OF NEWARK, a California municipal corporation

By: _____
Name: _____
Title: _____

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
Special Counsel

EXHIBIT A-1

LEGAL DESCRIPTION OF BUILDER PROPERTY

MAY 11, 2022
JOB NO. 2674-010

EXHIBIT A-1
LEGAL DESCRIPTION
BUILDER PROPERTY

REAL PROPERTY SITUATE IN THE CITY OF NEWARK, COUNTY OF ALAMEDA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING ALL OF PARCEL 1 AS SAID PARCEL IS SHOWN AND SO DESIGNATED ON PARCEL MAP 11072, RECORDED DECEMBER 11, 2020 AND FILED IN BOOK 348 OF MAPS, AT PAGE 32 IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY.

TOGETHER WITH:

THE 20 FOOT WIDE PRIVATE ACCESS EASEMENT (PAE) OVER PARCEL 2 AS SHOWN AND SO DELINEATED ON PARCEL MAP 11072, RECORDED DECEMBER 11, 2020 AND FILED IN BOOK 348 OF MAPS, AT PAGE 32 IN THE OFFICE OF THE COUNTY RECORDED OF ALAMEDA COUNTY.

CONTAINING 5.05 ACRES OF LAND, MORE OR LESS.

END DESCRIPTION

MARK H. WEHBER, P.L.S.
L.S. NO. 7960

F:\2674-000\2674-010\ACAD\SURVEY\LEGALS\LG-11 DEVELOPMENT PARCEL NORTH OF HETCH HETCHY.docx

EXHIBIT A-2

LEGAL DESCRIPTION OF TWPO PROPERTY

MAY 11, 2022
JOB NO. 2674-010

EXHIBIT A-2
LEGAL DESCRIPTION
"TWPO" PROPERTY

REAL PROPERTY SITUATE IN THE CITY OF NEWARK, COUNTY OF ALAMEDA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING ALL OF PARCEL 2 AS SAID PARCEL IS SHOWN AND SO DESIGNATED ON PARCEL MAP 11072, RECORDED DECEMBER 11, 2020 AND FILED IN BOOK 348 OF MAPS, AT PAGE 32 IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY.

CONTAINING 2.08 ACRES OF LAND, MORE OR LESS.

END DESCRIPTION

MARK H. WEHBER, P.L.S.
L.S. NO. 7960

F:\2674-000\2674-010\ACAD\SURVEY\LEGALS\LG-09 AFFORDABLE PARCEL.docx

EXHIBIT A-3

LEGAL DESCRIPTION OF STATION PARCEL

MAY 11, 2022
JOB NO. 2674-010

EXHIBIT A-3
LEGAL DESCRIPTION
STATION PARCEL
PARCELS 1 & 2 (PORTION), 348 M 32,
CITY OF NEWARK, COUNTY OF ALAMEDA, CALIFORNIA

REAL PROPERTY SITUATE IN THE CITY OF NEWARK, COUNTY OF ALAMEDA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING A PORTION OF PARCELS 1 & 2 AS SAID PARCELS ARE SHOWN AND SO DESIGNATED ON PARCEL MAP 5911072, RECORDED DECEMBER 11, 2020 AND FILED IN BOOK 348 OF MAPS, AT PAGE 32 IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID PARCEL 2;

THENCE, FROM SAID POINT OF COMMENCEMENT, ALONG THE NORTHERN LINE OF SAID PARCEL 2, SOUTH 68°14'57" WEST 3.00 FEET TO THE **POINT OF BEGINNING** FOR THIS DESCRIPTION;

THENCE, FROM SAID POINT OF BEGINNING, LEAVING SAID NORTHERN LINE, SOUTH 21°49'39" EAST 210.97 FEET;

THENCE, ALONG THE ARC OF A NON-TANGENT 20.00 FOOT RADIUS CURVE TO THE RIGHT, FROM WHICH THE CENTER OF SAID CURVE BEARS NORTH 74°58'26" WEST, THROUGH A CENTRAL ANGLE OF 53°13'23", AN ARC DISTANCE OF 18.58 FEET;

THENCE, SOUTH 68°14’57” WEST 66.35 FEET;

THENCE, ALONG THE ARC OF A TANGENT 215.50 FOOT RADIUS CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 12°26'08", AN ARC DISTANCE OF 46.77 FEET;

THENCE, SOUTH 80°41’05” WEST 116.30 FEET;

THENCE, SOUTH 87°26’03” WEST 27.92 FEET;

THENCE, ALONG THE ARC OF A NON-TANGENT 478.00 FOOT RADIUS CURVE TO THE RIGHT, FROM WHICH THE CENTER OF SAID CURVE BEARS NORTH 9°35'41" WEST, THROUGH A CENTRAL ANGLE OF 9°42'13", AN ARC DISTANCE OF 80.95 FEET;

THENCE, ALONG THE ARC OF A NON-TANGENT 23.00 FOOT RADIUS CURVE TO THE RIGHT, FROM WHICH THE CENTER OF SAID CURVE BEARS NORTH 57°11'11" EAST, THROUGH A CENTRAL ANGLE OF 14°09'24", AN ARC DISTANCE OF 5.68 FEET;

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16831408.21 a07/05/22

THENCE, ALONG THE ARC OF A TANGENT 45.00 FOOT RADIUS CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 131°37'09", AN ARC DISTANCE OF 103.37 FEET;

THENCE, SOUTH 29°43'26" WEST 31.92 FEET;

THENCE, SOUTH 68°14'57" WEST 48.75 FEET;

THENCE, NORTH 21°45'03" WEST 132.67 FEET;

THENCE, RETURNING TO SAID NORTHERN LINE, NORTH 68°14'57" EAST 94.66 FEET;

THENCE, LEAVING SAID NORTHERN LINE, SOUTH 20°31'43" EAST 96.30 FEET;

THENCE, NORTH 68°26'15" EAST 219.96 FEET;

THENCE, NORTH 20°22'20" WEST 97.03 FEET;

THENCE, RETURNING TO SAID NORTHERN LINE, NORTH 68°14'57" EAST 177.93 FEET; TO THE **POINT OF BEGINNING.**

CONTAINING 65,221 SQUARE FEET OF LAND, MORE OR LESS.

ATTACHED HERETO IS A PLAT TO ACCOMPANY LEGAL DESCRIPTION, EXHIBIT A-4, AND BY THIS REFERENCE MADE A PART HEREOF.

END DESCRIPTION

MARK H. WEHBER, P.L.S.
L.S. NO. 7960

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EXHIBIT A-4

DEPICTION OF STATION PARCEL

EXHIBIT A-4

DEPICTION OF STATION PARCEL BEING OFFERED FOR DEDICATION

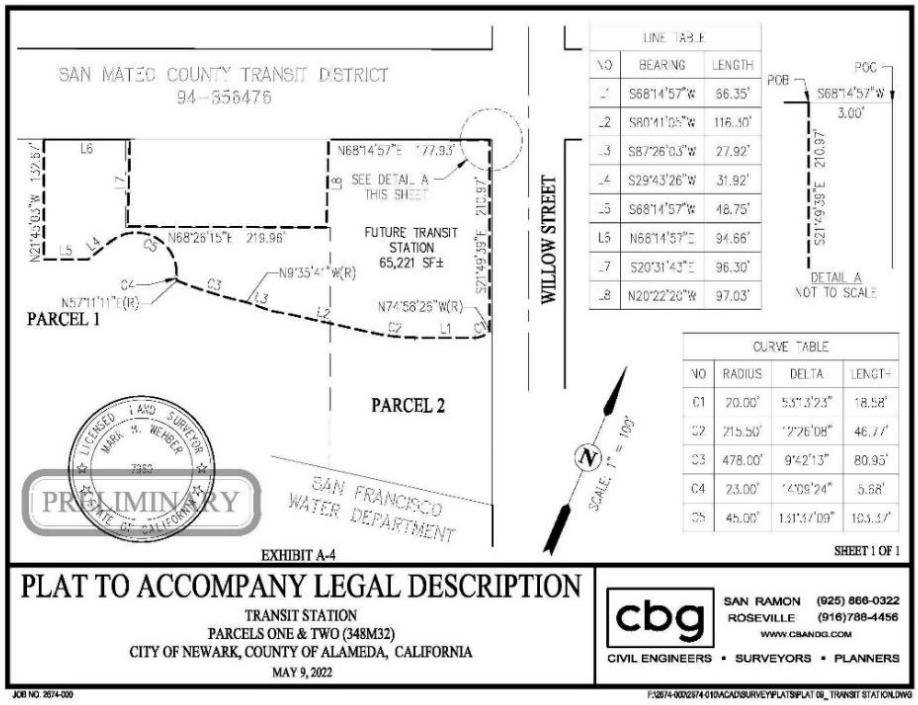


EXHIBIT A-5

LEGAL DESCRIPTION OF PARKING EASEMENT AREA

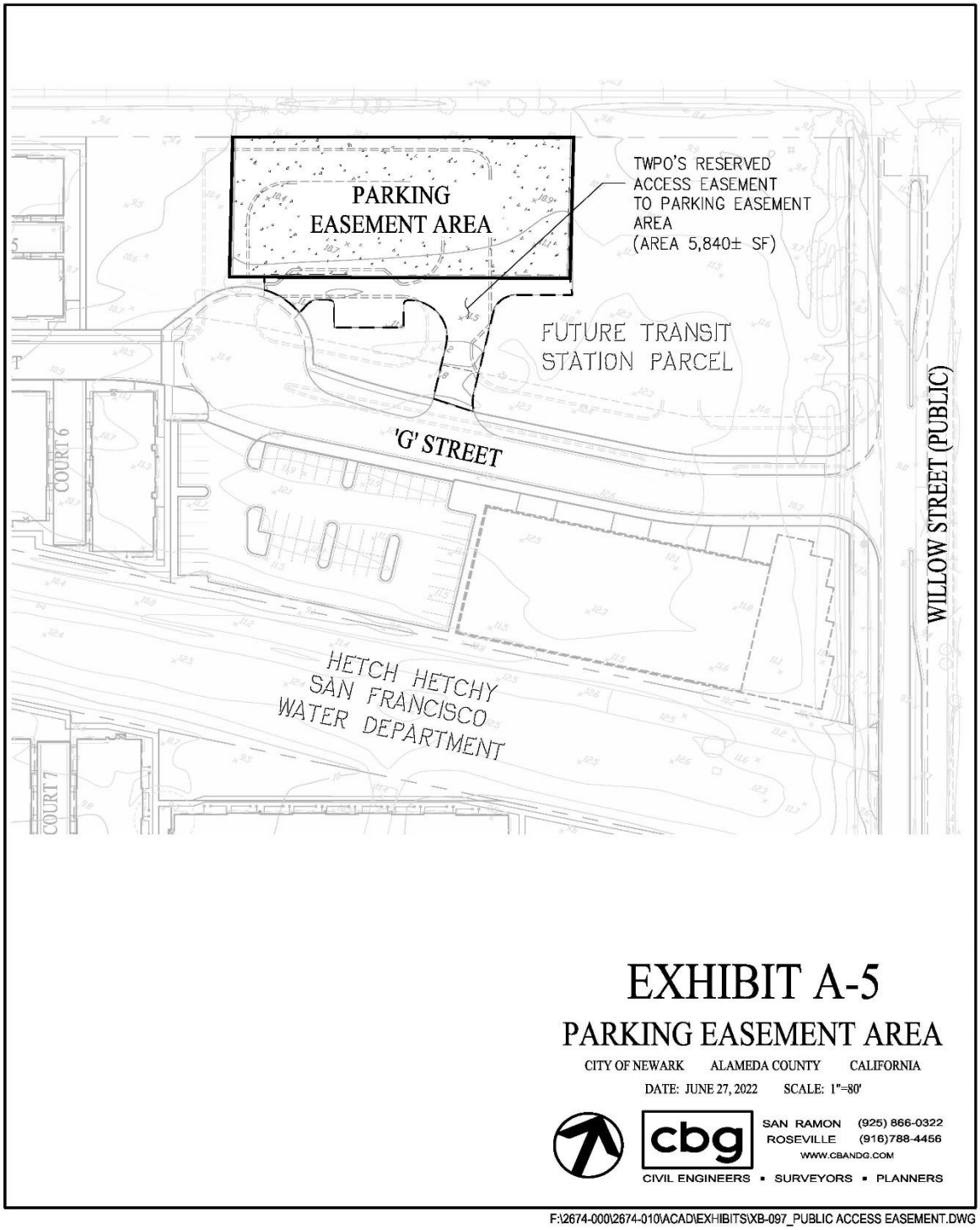


EXHIBIT B

FORM OF IRREVOCABLE OFFER OF DEDICATION

RECORDING REQUESTED BY AND
WHEN RECORDED RETURN TO:

City of Newark
37101 Newark Blvd
Newark, CA 94560
Attn: City Clerk

(Space Above For Recorder's Use)

This Irrevocable Offer of Dedication is recorded at the request and for the benefit of the City of Newark and is exempt from the payment of recording fees pursuant to Government Code Section 27383.

IRREVOCABLE OFFER OF DEDICATION OF STATION PARCEL AND PARKING EASEMENT

THIS IRREVOCABLE OFFER OF DEDICATION OF STATION PARCEL AND PARKING EASEMENT (collectively, the "**IOD**") is made this ___ day of _____, 2022, by and among LENNAR HOMES OF CALIFORNIA, LLC, a California limited liability company ("**Builder**"), THE WILLOW PROJECT OWNER, LLC, a Delaware limited liability company ("**TWPO**")(collectively, "**Grantors**") in favor of the CITY OF NEWARK, a California municipal corporation ("**City**").

R E C I T A L S

A. Grantor Builder is the legal owner of a fee interest in certain real property located in the City of Newark, County of Alameda, State of California, as described on **Exhibit A-1** attached hereto. Grantor TWPO is the legal owner of a fee interest in certain real property located in the City of Newark, County of Alameda, State of California, as described on **Exhibit A-2** attached hereto. The real property described in **Exhibits A-3** and **A-4** is the "**Station Parcel**" to be dedicated pursuant to terms of this Agreement. TWPO also intends to grant an easement in, upon, over, and through a portion of the TWPO Property described on **Exhibit A-5** as the "**Parking Easement Area**" (the "**Parking Easement**") to the City as owner of the Station Parcel. TWPO also reserves in favor of TWPO and its successors an access easement over and across the Station Parcel to access the Parking Easement Area in the location depicted on **Exhibit A-5**, or as agreed to by the City and the fee owner of the Parking Easement Area.

B. Grantors and the City are parties to that certain Station Parcel and Parking Easement Dedication Agreement, dated _____ ___, 2022 which document is on file with the City Clerk of the City of Newark (the "**Dedication Agreement**"). The Dedication Agreement sets forth the terms and conditions on which Grantors shall dedicate and deliver the Station Parcel and Parking

Easement to the City for its use. Section 3.1 of the Dedication Agreement generally provides for the City's acceptance of this IOD upon occurrence of the following two conditions precedent: (i) completion and acceptance of certain improvements on the Station Parcel (the "**Interim Improvements**," as described on **Exhibit B** hereto), and (ii) the issuance of the final market rate residential Certificate of Occupancy in the Willow Project (the "**Final CofO**").

C. Grantors desire to provide this IOD to dedicate the Station Parcel and the Parking Easement to the City, subject to the conditions and terms set forth herein.

A G R E E M E N T

NOW, THEREFORE, Grantors and City agree as follows:

1. Irrevocable Offer. Grantors offer for dedication the following, which may only be accepted jointly and are not offered separately:

(a) Station Parcel. Grantors irrevocably offer for dedication in fee simple the Station Parcel to the City, which offer is subject to satisfaction of the conditions and the terms set forth in this IOD and the Dedication Agreement. City may accept this IOD only if and when the conditions to Grantors' delivery of the Station Parcel to the City set forth in this IOD and section 3.1 of the Dedication Agreement have been satisfied. In order to provide legal access to the future lot underlying the Parking Easement Area (the "**Retained Lot**"), TWPO reserves in favor of TWPO and its successors-in-interest to the Retained Lot a non-exclusive access easement over and across the Station Parcel to access the Parking Easement Area in the location depicted on **Exhibit A-5**, or as agreed to from time to time in a recorded writing signed by the City and the fee owner of the Retained Lot.

(b) Parking Easement. TWPO irrevocably offers for dedication an easement in, upon, over and through the Parking Easement Area for use in conjunction with the Station Parcel by the City for surface parking including travel lanes, which offer is subject to satisfaction of the conditions and the terms set forth in this IOD and the Dedication Agreement. City may accept this IOD only if and when the conditions to Grantors' delivery of the Station Parcel to the City set forth in this IOD and section 3.1 of the Dedication Agreement have been satisfied.

2. Delivery Conditions.

(a) Title to Station Parcel. As to the Station Parcel, this IOD is made subject to, and fee title to the Station Parcel shall be subject to, all matters of record as of the date of City's acceptance of this IOD, including, without limitation, any deed restrictions or other requirements imposed by the Regional Water Quality Control Board or other governmental agencies regulating the environmental condition of the Station Parcel, except the Station Parcel shall be free and clear of any monetary encumbrances other than the lien of non-delinquent real property taxes and assessments not yet due and payable. Subject to the foregoing and section 2.2 of the Dedication Agreement, City shall accept this IOD and fee title to the Station Parcel with all faults, in an "as-is" condition without representation or warranty by Grantors as to the condition of the Station Parcel.

(b) Parking Easement. As to the Parking Easement, this IOD is made subject to all matters of record as of the date of City's acceptance of this IOD, including, without limitation, any deed restrictions or other requirements imposed by the Regional Water Quality Control Board or other governmental agencies regulating the environmental condition of the Parking Easement Area, except the Parking Easement Area shall be free and clear of any monetary encumbrances other than the lien of non-delinquent real property taxes and assessments not yet due and payable. Subject to the foregoing and section 2.2 of the Dedication Agreement, City shall accept this IOD and the Parking Easement with all faults, in an "as-is" condition without representation or warranty by Grantors as to the condition of the Parking Easement Area.

(c) City Acceptance of IOD. The City Council shall formally accept this IOD pursuant to section 3.1 of the Dedication Agreement and in the manner described in section 3(f) below ("**IOD Acceptance**").

(d) City Obligations Relating to Parking Easement Area After IOD Acceptance. Following the IOD Acceptance, City shall be responsible, at its sole cost and expense, to maintain in a good, safe and workmanlike manner any surface improvements over and upon the Parking Easement Area. Subject to section 2.2 of the Dedication Agreement, City will defend, indemnify and hold harmless the fee owner of the Parking Easement Area from any and all claims arising from or relating to the use of the Parking Easement Area for parking uses only.

(e) Expiration of Offer. If IOD Acceptance has not occurred within ninety (90) days of completion and acceptance of the Interim Improvements or the issuance of the 279th residential Certificate of Occupancy for the Willow Project, whichever is later (as described in section 3.1 of the Dedication Agreement), then notwithstanding anything herein to the contrary, this IOD shall be automatically expire and be of no further force and effect. Within thirty (30) days thereafter, City shall execute and deliver to Grantors for recordation a quitclaim deed quitclaiming to Grantors any and all rights City may have under this IOD with respect to the Station Parcel and the Parking Easement Area. In the event that neither of the conditions required for IOD Acceptance in section 3.1 of the Dedication Agreement have occurred within five (5) years of the date this IOD is recorded in the Official Records of County of Alameda County, California, City may, in its sole and absolute discretion, accept this IOD at any time thereafter.

(f) Manner of Acceptance. City's acceptance of this IOD shall be evidenced by a written resolution of the City Council accepting this IOD, which shall be recorded in the Official Records of Alameda County, California.

3. Satisfaction of Station Requirement. The execution of the Dedication Agreement and execution and recordation of this IOD will fully satisfy any requirement in the conditions of approval for the Willow Project with respect to dedication of the Station Parcel with respect to development of the Willow Project. Without limiting the foregoing, following IOD Acceptance, the City shall be solely responsible for any demolition of improvements on the Station Parcel or Parking Easement Area, and all construction costs of any improvements to the Station Parcel or the Parking Easement Area, including but not limited to, construction of a transit station thereon.

4. No Implied Dedication or Right in Public. This IOD shall not be used or construed to allow anyone, prior to IOD Acceptance, to obtain any rights of public use over the Station Parcel or the Parking Easement Area.

5. Duration. This IOD shall be binding upon the City and its heirs, assigns or successors-in-interest to the Station Parcel and/or Parking Easement Area and shall not expire or terminate except as set forth herein or in the Dedication Agreement.

6. Remedies. The Grantors and the City may pursue all equitable remedies to enforce the terms, conditions and restrictions of the IOD and their respective interests in the Station Parcel and Parking Easement Area. In the event of a breach, any forbearance on the part of any such party to enforce the terms and provisions hereof shall not be deemed a waiver of enforcement rights regarding any subsequent breach.

7. Successors and Assigns. Grantors may convey fee title to the Station Parcel or Parking Easement Area to any owner of Grantors' proposed development on the adjacent real property; provided, however, (i) until recordation of the IOD any such conveyance shall require approval of the City (which shall not unreasonably be withheld) and (ii) any such conveyance shall be deemed subject to the terms, covenants, conditions, exceptions, obligations and reservations contained in this IOD and shall be binding upon and inure to the benefit of the successors and assigns of both the Grantors and the City, whether voluntary or involuntary. Notwithstanding the foregoing, no approval of any conveyance between any of Builder, TWPO or TWPO's affordable housing developer for the affordable housing site within the Project shall require the consent of the City.

8. Severability. If any provision of this IOD is held to be invalid, or for any reason becomes unenforceable, no other provision shall be thereby affected or impaired.

9. No Conflict. This IOD shall be subject to all of the terms and conditions of the Dedication Agreement. In the event of any conflict between the Dedication Agreement and this IOD, the Dedication Agreement shall govern and control the intent and agreement of the parties hereto. All capitalized terms not otherwise defined herein shall have the meaning set forth in the Dedication Agreement.

[Remainder of page intentionally left blank]

Executed this _____ day of _____, 2022_.

"Builder"

LENNAR HOMES OF CALIFORNIA, LLC,
a California limited liability company

By: _____
Name: _____
Title _____

"TWPO"

THE WILLOW PROJECT OWNER, LLC,
a Delaware limited liability company

By: KPMW Integral, LLC,
a California limited liability company,
its Managing Member

By:_____
Name:_____
Title:_____

"City"

CITY OF NEWARK,
a California municipal corporation

By: _____
Name: _____
Title _____

Attest:

_____

APPROVED AS TO FORM

_____
_____
Special Counsel

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)
Notary Public, personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the Commonwealth of Pennsylvania that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)
Notary Public, personally appeared _____,
who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

EXHIBIT A-1

LEGAL DESCRIPTION OF BUILDER PROPERTY

MAY 11, 2022
JOB NO. 2674-010

EXHIBIT A-1
LEGAL DESCRIPTION
BUILDER PROPERTY

REAL PROPERTY SITUATE IN THE CITY OF NEWARK, COUNTY OF ALAMEDA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING ALL OF PARCEL 1 AS SAID PARCEL IS SHOWN AND SO DESIGNATED ON PARCEL MAP 11072, RECORDED DECEMBER 11, 2020 AND FILED IN BOOK 348 OF MAPS, AT PAGE 32 IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY.

TOGETHER WITH:

THE 20 FOOT WIDE PRIVATE ACCESS EASEMENT (PAE) OVER PARCEL 2 AS SHOWN AND SO DELINEATED ON PARCEL MAP 11072, RECORDED DECEMBER 11, 2020 AND FILED IN BOOK 348 OF MAPS, AT PAGE 32 IN THE OFFICE OF THE COUNTY RECORDED OF ALAMEDA COUNTY.

CONTAINING 5.05 ACRES OF LAND, MORE OR LESS.

END DESCRIPTION

MARK H. WEHBER, P.L.S.
L.S. NO. 7960

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EXHIBIT A-2

LEGAL DESCRIPTION OF TWPO PROPERTY

MAY 11, 2022
JOB NO. 2674-010

EXHIBIT A-2
LEGAL DESCRIPTION
"TWPO" PROPERTY

REAL PROPERTY SITUATE IN THE CITY OF NEWARK, COUNTY OF ALAMEDA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING ALL OF PARCEL 2 AS SAID PARCEL IS SHOWN AND SO DESIGNATED ON PARCEL MAP 11072, RECORDED DECEMBER 11, 2020 AND FILED IN BOOK 348 OF MAPS, AT PAGE 32 IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY.

CONTAINING 2.08 ACRES OF LAND, MORE OR LESS.

END DESCRIPTION

MARK H. WEHBER, P.L.S.
L.S. NO. 7960

F:\2674-000\2674-010\ACAD\SURVEY\LEGALS\LG-09 AFFORDABLE PARCEL.docx

EXHIBIT A-3

LEGAL DESCRIPTION OF STATION PARCEL BEING OFFERED FOR DEDICATION

MAY 11, 2022
JOB NO. 2674-010

EXHIBIT A-3
LEGAL DESCRIPTION
STATION PARCEL
PARCELS 1 & 2 (PORTION), 348 M 32,
CITY OF NEWARK, COUNTY OF ALAMEDA, CALIFORNIA

REAL PROPERTY SITUATE IN THE CITY OF NEWARK, COUNTY OF ALAMEDA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING A PORTION OF PARCELS 1 & 2 AS SAID PARCELS ARE SHOWN AND SO DESIGNATED ON PARCEL MAP 5911072, RECORDED DECEMBER 11, 2020 AND FILED IN BOOK 348 OF MAPS, AT PAGE 32 IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE NORTHEAST CORNER OF SAID PARCEL 2;

THENCE, FROM SAID POINT OF COMMENCEMENT, ALONG THE NORTHERN LINE OF SAID PARCEL 2, SOUTH 68°14'57" WEST 3.00 FEET TO THE **POINT OF BEGINNING** FOR THIS DESCRIPTION;

THENCE, FROM SAID POINT OF BEGINNING, LEAVING SAID NORTHERN LINE, SOUTH 21°49'39" EAST 210.97 FEET;

THENCE, ALONG THE ARC OF A NON-TANGENT 20.00 FOOT RADIUS CURVE TO THE RIGHT, FROM WHICH THE CENTER OF SAID CURVE BEARS NORTH 74°58'26" WEST, THROUGH A CENTRAL ANGLE OF 53°13'23", AN ARC DISTANCE OF 18.58 FEET;

THENCE, SOUTH 68°14’57” WEST 66.35 FEET;

THENCE, ALONG THE ARC OF A TANGENT 215.50 FOOT RADIUS CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 12°26'08", AN ARC DISTANCE OF 46.77 FEET;

THENCE, SOUTH 80°41’05” WEST 116.30 FEET;

THENCE, SOUTH 87°26’03” WEST 27.92 FEET;

THENCE, ALONG THE ARC OF A NON-TANGENT 478.00 FOOT RADIUS CURVE TO THE RIGHT, FROM WHICH THE CENTER OF SAID CURVE BEARS NORTH 9°35'41" WEST, THROUGH A CENTRAL ANGLE OF 9°42'13", AN ARC DISTANCE OF 80.95 FEET;

THENCE, ALONG THE ARC OF A NON-TANGENT 23.00 FOOT RADIUS CURVE TO THE RIGHT, FROM WHICH THE CENTER OF SAID CURVE BEARS NORTH 57°11'11" EAST, THROUGH A CENTRAL ANGLE OF 14°09'24", AN ARC DISTANCE OF 5.68 FEET;

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EXHIBIT A-3

(Continued)

THENCE, ALONG THE ARC OF A TANGENT 45.00 FOOT RADIUS CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 131°37'09", AN ARC DISTANCE OF 103.37 FEET;

THENCE, SOUTH 29°43'26" WEST 31.92 FEET;

THENCE, SOUTH 68°14'57" WEST 48.75 FEET;

THENCE, NORTH 21°45'03" WEST 132.67 FEET;

THENCE, RETURNING TO SAID NORTHERN LINE, NORTH 68°14'57" EAST 94.66 FEET;

THENCE, LEAVING SAID NORTHERN LINE, SOUTH 20°31'43" EAST 96.30 FEET;

THENCE, NORTH 68°26'15" EAST 219.96 FEET;

THENCE, NORTH 20°22'20" WEST 97.03 FEET;

THENCE, RETURNING TO SAID NORTHERN LINE, NORTH 68°14'57" EAST 177.93 FEET; TO THE **POINT OF BEGINNING.**

CONTAINING 65,221 SQUARE FEET OF LAND, MORE OR LESS.

ATTACHED HERETO IS A PLAT TO ACCOMPANY LEGAL DESCRIPTION, EXHIBIT A-4, AND BY THIS REFERENCE MADE A PART HEREOF.

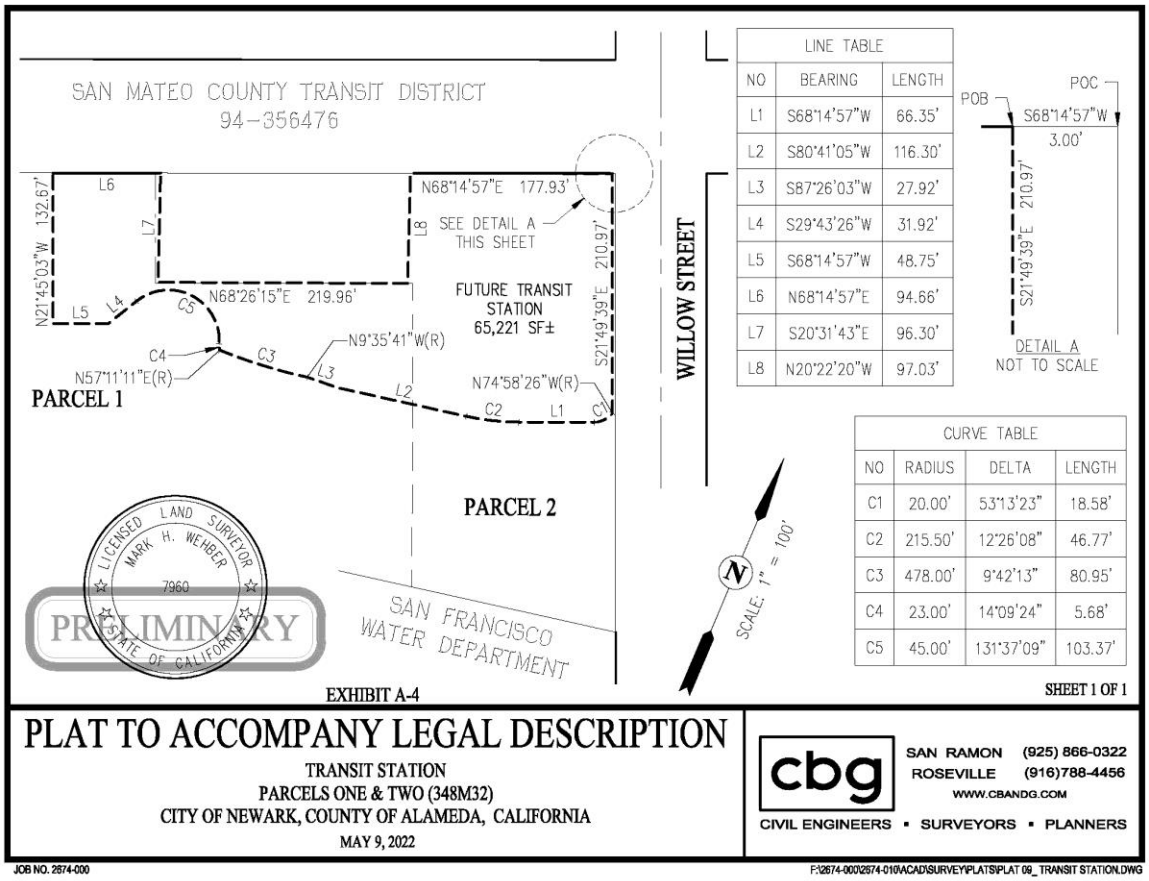
END DESCRIPTION

MARK H. WEHBER, P.L.S.
L.S. NO. 7960

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EXHIBIT A-4

DEPICTION OF STATION PARCEL BEING OFFERED FOR DEDICATION



LINE TABLE		
NO	BEARING	LENGTH
L1	S68°14'57"W	66.35'
L2	S80°41'05"W	116.30'
L3	S87°26'03"W	27.92'
L4	S29°43'26"W	31.92'
L5	S68°14'57"W	48.75'
L6	N68°14'57"E	94.66'
L7	S20°31'43"E	96.30'
L8	N20°22'20"W	97.03'

CURVE TABLE			
NO	RADIUS	DELTA	LENGTH
C1	20.00'	53°13'23"	18.58'
C2	215.50'	12°26'08"	46.77'
C3	478.00'	9°42'13"	80.95'
C4	23.00'	14°09'24"	5.68'
C5	45.00'	131°37'09"	103.37'

EXHIBIT A-5

DEPICTION OF PARKING EASEMENT AREA BEING OFFERED FOR DEDICATION

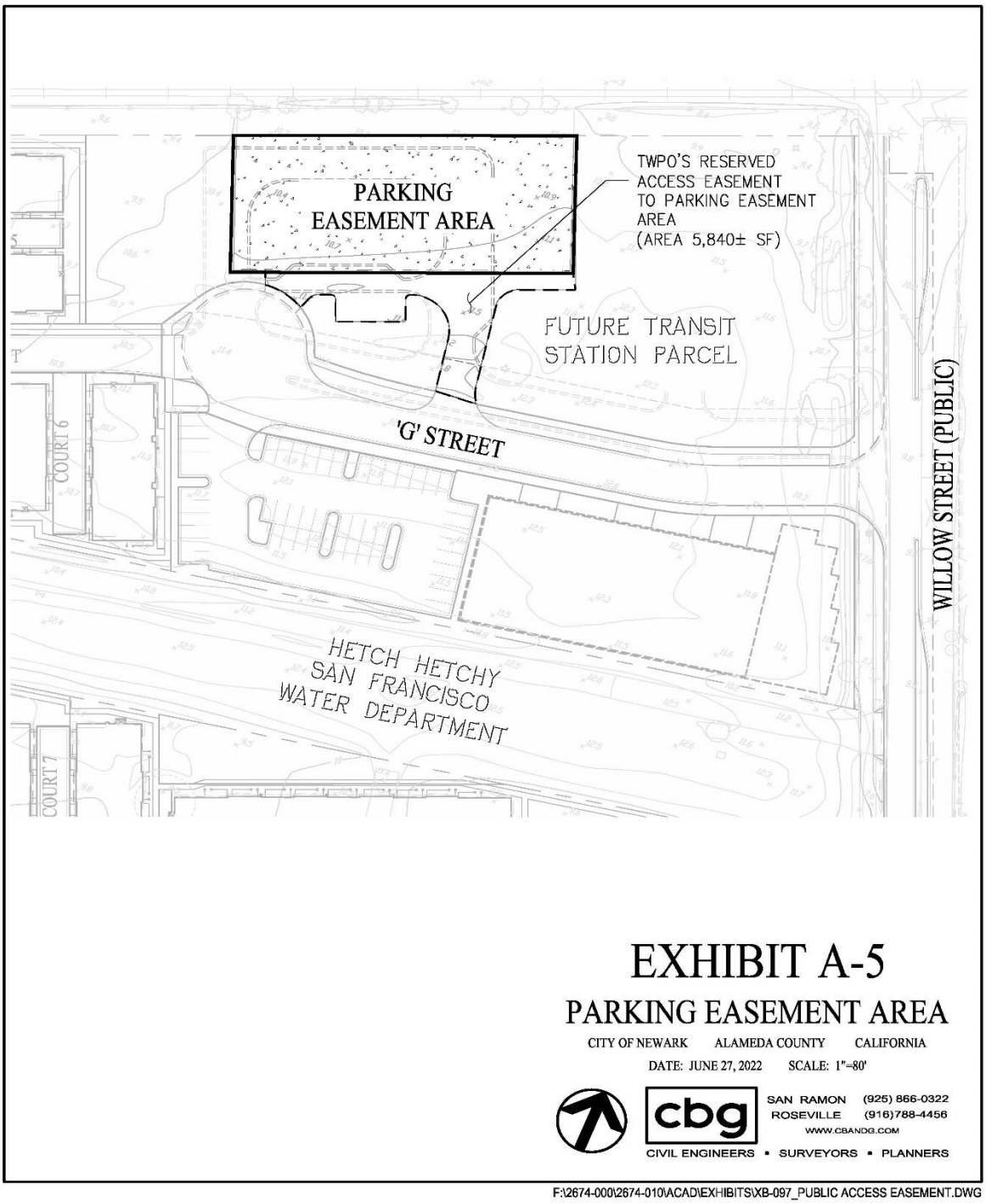


EXHIBIT B

INTERIM IMPROVEMENTS

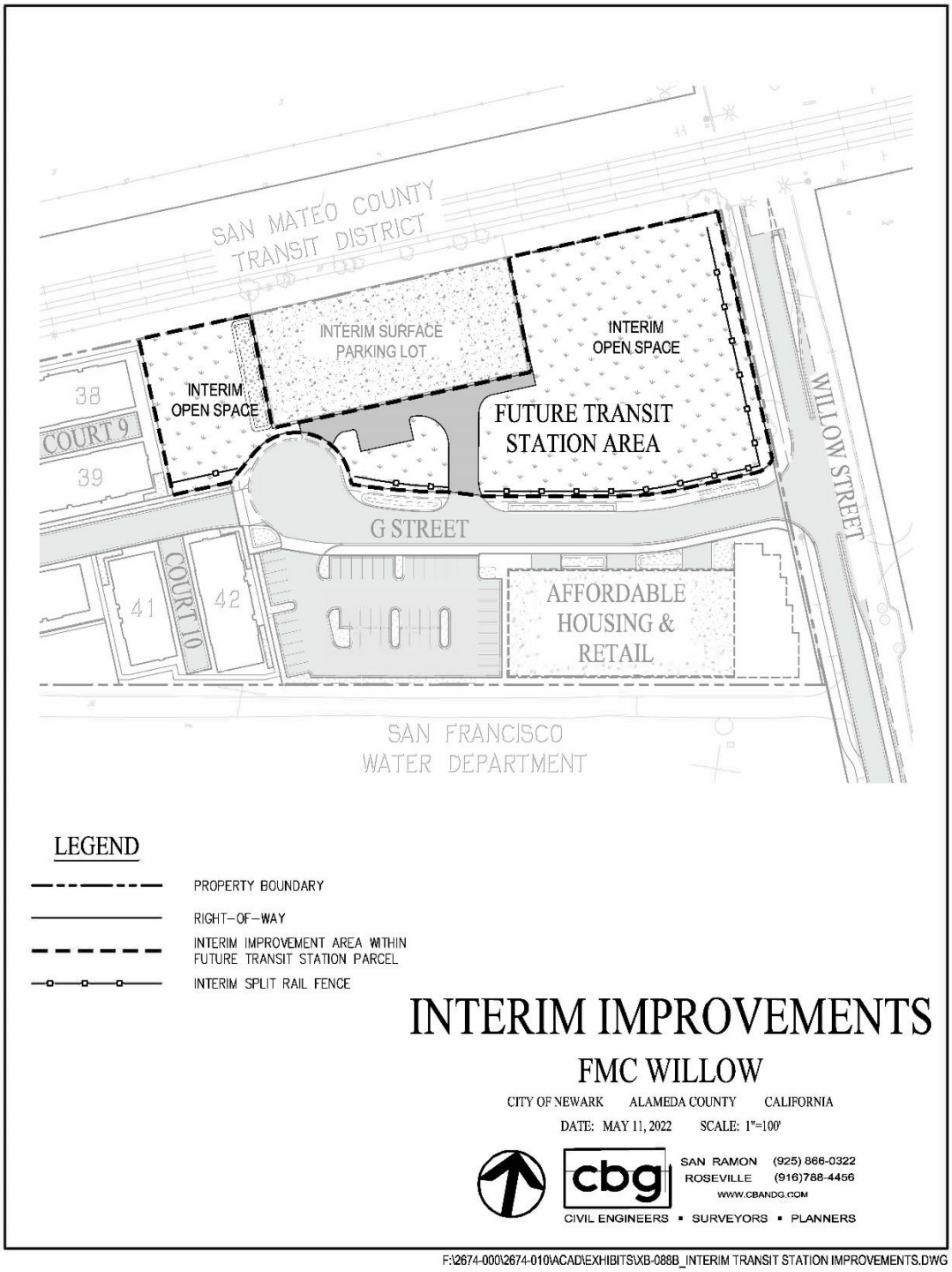
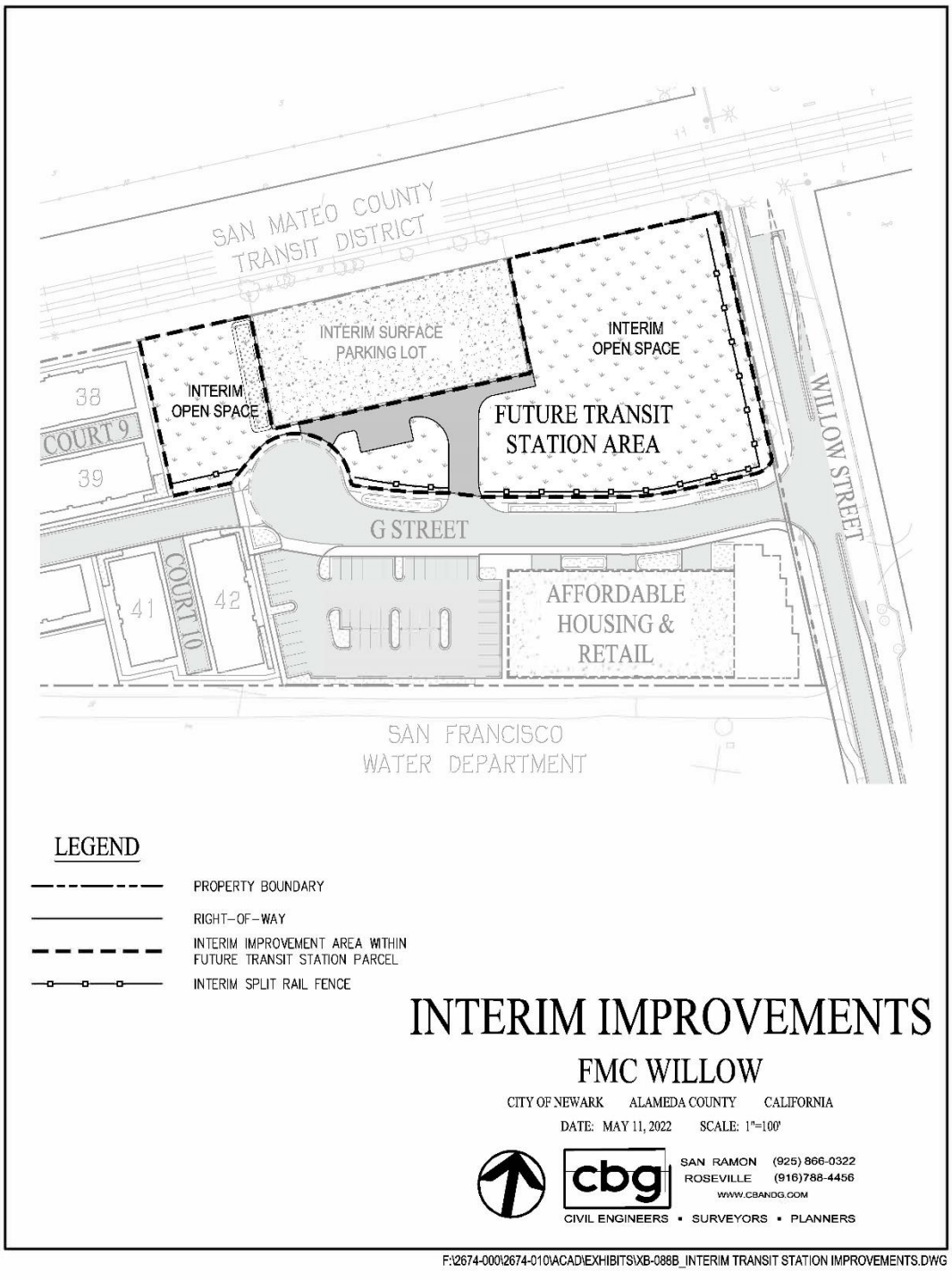


EXHIBIT C

INTERIM IMPROVEMENTS



RESOLUTION NO. _____

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWARK APPROVING A GENERAL PLAN AMENDMENT, A SPECIFIC PLAN AMENDMENT, DESIGN REVIEW, MINOR USE PERMIT, DENSITY BONUS, PARK AGREEMENT AMENDMENT, ALTERNATIVE MEANS OF COMPLIANCE TO PAYMENT OF HOUSING IMPACT FEE, VESTING TENTATIVE MAP, AND ADDENDUM TO THE DUMBARTON TRANSIT ORIENTED DEVELOPMENT SPECIFIC PLAN ENVIRONMENTAL IMPACT REPORT CERTIFYING THAT THE PREVIOUSLY APPROVED EIR (STATE CLEARINGHOUSE NUMBER 2010042012) ADDRESSES ALL THE IMPACTS OF THE PROPOSED 'FMC WILLOW AND GRAND PARK' DEVELOPMENT, TO ALLOW FOR PHASED RESIDENTIAL AND COMMERCIAL DEVELOPMENT AT 8787 ENTERPRISE DRIVE (APNS 537-0852-001-08, 537-0852-002-09, & 092-0100-005)

WHEREAS, Willow Project Owner, LLC ("Applicant") submitted applications for a General Plan Amendment, Rezone, Specific Plan Amendment, Design Review, Minor Use Permit, Density Bonus, Park Agreement Amendment, Alternative Means of Compliance to Payment of Housing Impact Fee, Vesting Tentative Map, and an Addendum to the Dumbarton Transit Oriented Development Specific Plan Environmental Impact Report with the City of Newark to allow phased residential and commercial development at 8787 Enterprise Drive (APNs 537-0852-001-08, 537-0852-002-09, & 092-0100-005) (the "Project"); and

WHEREAS, the Project consists of a phased development, the first phase of which will focus on: construction of phase 1-3, 66 dwelling units in PA4, and the community building, for a total of 344 residential dwelling units. Phase 2 would consist of the remaining 26 dwelling units in phase 4 and the Grand Park; and

WHEREAS, on December 12, 2013, the City Council approved The City of Newark General Plan, in order to, among other things update the policy framework and land use designations that will guide future development in Newark through 2035, including the 125-acre Dumbarton Transit Oriented Development Specific Plan; and

WHEREAS, prior to adopting the General Plan on December 12, 2013, the City Council certified the General Plan Tune Up Draft Program Environmental Impact Report (EIR) (State Clearinghouse No. 2013012052), which was prepared for the General Plan Update and associated actions, analyzed the development intensities on a citywide impact level and adopted a Mitigation Monitoring and Reporting Program for the Newark General Plan Update; and

WHEREAS, on September 8, 2011, the City Council approved the Dumbarton Transit

Oriented Development Specific Plan (known as Bayside Newark), to provide a memorable community where housing, recreation, neighborhood retail center and employment opportunities would be integrated; and

WHEREAS, pursuant to and in accordance with the provisions of the California Environmental Quality Act (Public Resources Code Section 21000 et seq.; herein referred to as "CEQA"), the State of California Guidelines for the Implementation of the California Environmental Quality Act (commencing with Section 15000 of Title 14 of the California Code of Regulations; herein referred to as the "CEQA Guidelines"), the City is the "lead agency" for the preparation and consideration of environmental documents for the Project; and

WHEREAS, in accordance with CEQA Guidelines Section 15183, the City prepared an initial study to analyze the environmental effects of implementing the Specific Plan; and

WHEREAS, the City of Newark certified the Dumbarton Transit-Oriented Development Specific Plan Environmental Impact Report (State Clearinghouse Number 2010042012) ("Specific Plan EIR"), adopted a statement of overriding considerations for the significant and unavoidable impacts identified therein, and approved a mitigation monitoring and reporting program on September 8, 2011; and

WHEREAS, pursuant to the requirements of the California Environmental Quality Act (CEQA) and CEQA Guidelines Sections 15162 and 15164, an initial study and an Addendum (collectively, "Addendum") to the Specific Plan EIR has been prepared for the Project, attached as Exhibit 1; and

WHEREAS, through this Addendum, it has been determined that the Project does not result in any new significant impacts and the conclusions in the Specific Plan EIR remain unchanged; and

WHEREAS, the Applicant proposes a General Plan land use amendments to various areas within the FMC Willow and Grand Park Project as shown in Exhibit 2 and are generally described as follows:

> The project area will be redesignated from Community Commercial, High Density Residential, Parks and Recreational Facilities and Public Institutional to Medium Density Residential, Commercial Mixed Use, Public Institutional and Parks and Recreational Facilities for all that portion of real property shown on Vesting Tentative Tract Map 8559 in the City of Newark, County of Alameda, State of California as shown in Exhibit 3, attached hereto and incorporated by reference.

WHEREAS, the Applicant proposes amendments to the Dumbarton Transit Oriented Specific Plan for the FMC Willow and Grand Park Project, and make other conforming amendments to ensure consistency, described as follows:

> The Project area will be redesignated from Commercial/Retail (R), Commercial/Office (C), High Density Residential (HDR), Transit Station (TS), Parks & Open Space (POS) to

Commercial Mixed Use, Medium/High Density Residential (MHDR), Transit Station (TS), Restricted Use Areas and Parks & Open Space (POS) for all that portion of real property shown on Vesting Tentative Tract Map 8559 in the City of Newark, County of Alameda, State of California as shown in Exhibit 4, attached hereto and incorporated by reference.

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WHEREAS, the Applicant is requesting approval of a Vesting Tentative Map as shown in Exhibit 3; and

WHEREAS, the Project requires Design Review to ensure the overall design of the Project including its scale, massing, site plan, exterior design, and landscaping will enhance the appearance of the surrounding natural and built environment; and

WHEREAS, the Project requires a Minor Use Permit to allow for reduced parking throughout the project site, in accordance with Section 17.23.050 of the Zoning Ordinance; and

WHEREAS, the Applicant has requested an incentive to allow for reduced parking pursuant to Density Bonus Law (Government Code Section 65915 et seq. and Section 17.19.030B of the Zoning Ordinance); and

WHEREAS, the Applicant proposes to offer the City 1.8 acres for a future transit station, including property intended for the station as well as an easement over Project property to be used for parking purposes; and

WHEREAS, the Applicant has proposed an amendment to the existing Park Agreement to reconfigure the previously approved 5-acre Grand Park (the "Park Agreement Amendment"). The size of the Grand Park will remain the same, but the proposed boundary would be adjusted as part of the Project and incorporates additional land on the eastern boundary that is designated as Commercial/Office by the Specific Plan and is currently zoned as BTP by the City. The land to the northeast will be reduced in size and is designated as Parks and Open Space in the Specific Plan and is zoned Park by the City, as described in Exhibit 5; and.

WHEREAS, in accord with Newark Municipal Code Section 17.18.050, the Applicant is requesting approval of an Alternative Means of Compliance to Payment of Housing Impact Fee by providing an affordable housing agreement that will require the Applicant to provide on-site affordable units as an alternative to paying the City's housing impact fee, as described in the Affordable Housing Agreement, Exhibit 6; and

WHEREAS, pursuant to Newark Municipal Code Section 17.31.060 and pursuant to State law, the City published a public hearing notice in The Tri City Voice on August 23, 2022 and mailed public hearing notice as required for a public hearing before the City Council at 7:00 p.m. on September 8, 2022; and

WHEREAS, on July 12, 2022, the Planning Commission of the City of Newark conducted a duly noticed meeting to consider the Project and the Addendum, considered all public testimony, written and oral, presented at the meeting, received and considered the written information and recommendation of the staff report, and recommended the City Council approve the Project and

Addendum ; and

WHEREAS, on September 8, 2022 the City Council of the City of Newark conducted a duly noticed meeting to consider the Project and the Addendum, considered all public testimony, written and oral, presented at the meeting; and received and considered the written information and recommendation of the staff report for the September 8, 2022 meeting and the recommendation of the Planning Commission related to the proposed Project; and

WHEREAS, the City Council fully considered the Project application, Addendum, entitlements, staff report, findings of fact, conditions of approval, public comments, and all other testimony and evidence presented at the public hearing; and

WHEREAS, the City Council finds that the Addendum reflects the City's independent judgement and analysis of the Project, that the Addendum has been prepared consistent with CEQA, specifically CEQA Guidelines section 15164 which requires lead agencies to prepare an addendum to a previously certified environmental impact report if some changes or additions to the project are necessary but none of the conditions requiring preparation of a subsequent EIR are present; and

WHEREAS, the City Council finds that the Project satisfies the requisite findings of fact necessary for approval as set forth in the entire record for the Project and further explained in the staff report and the recommended findings of fact and determinations associated with this Resolution, as identified in "Exhibit 7" attached to this Resolution (collectively, the "Findings an Determinations"); and

WHEREAS, the location and custodian of the Project application and other documents that constitute a record of proceedings for the Project is the City of Newark, 37101 Newark Blvd., Newark, CA 94560; and

WHEREAS, the City's General Plan, the Dumbarton Transit Oriented Development Specific Plan, Zoning Code, and Municipal Code are incorporated herein by reference, and are available for review at City Hall during normal business hours and on the City's website.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Newark as follows:

Section 1. That the forgoing recitals are true and correct and made part of this Resolution.

Section 2. Based on the substantial evidence set forth in the record, the City Council finds that the Addendum adequately evaluates potential environmental impacts of the Project consistent with the requirements of CEQA and the CEQA Guidelines. The applicable mitigation measures identified in the Specific Plan EIR would ensure that any potential environmental impacts of the Project would be reduced to less than significant levels. The impacts identified in the Specific Plan EIR

as significant and unavoidable remain significant and unavoidable but that the Project does not increase those previously identified impacts in their severity. No new mitigation measures are required to mitigate environmental impacts associated with the Project. Therefore, the Addendum supports the City's consideration of the Project, as outlined in the State CEQA Guidelines Section 15162 and 15164, and the City Council approves the Addendum identified as "Exhibit 1."

Section 3. Based on the Findings of Determination, the City Council approves the amendment to the General Plan, as identified in "Exhibit 2," to incorporate the Project and make other conforming amendments to ensure consistency.

Section 4. Based on the Findings of Determination, the City Council approves the amendment to the Dumbarton Transit Oriented Development Specific Plan, as identified in "Exhibit 4," to guide development within the overlay district and specify the points of deviation from the underlying base zone.

Section 5. Based on the Findings of Determination, the City Council approves Vesting Tentative Map 8559, as identified in "Exhibit 3".

Section 6. Based on the Findings of Determination, the City Council finds that the Project to ensure the design will enhance the appearance of the surrounding area and approves the Design Review for the Project.

Section 7. Based on the Findings of Determination, the City Council approves the Minor Use Permit for the Project to allow for reduced parking for the site.

Section 8. Based on the Findings of Determination, the City Council approves the parking reduction incentive as allowed per Density Bonus Law Government Code Section 65915 et seq. and Section 17.19.030B of the Zoning Ordinance.

Section 9. Based on the Findings of Determination, the City Council approves the Park Agreement Amendment to allow the reconfiguration of the Grand Park, as identified in Exhibit 5.

Section 10. The City Council approves and makes the Findings of Determination required by the City of Newark Municipal Code regarding the proposed General Plan Amendment, Specific Plan Amendment, Design Review, Minor Use Permit, Density Bonus, Park Agreement Amendment, Alternative Means of Compliance to Payment of Housing Impact Fee, and Vesting Tentative Map, as further explained in the staff report and set forth in "Exhibit 7" attached hereto and incorporated herein by this reference. The City Council further approves, as an Alternative Means of Compliance to Payment of Housing Impact Fee, the Affordable Housing Agreement, attached hereto as "Exhibit 6".

Section 11. Based on the Findings of Determination, the City Council approves the General Plan Amendment, Specific Plan Amendment, Design Review, Minor Use Permit, Density Bonus, Park Agreement Amendment, Alternative Means of Compliance to Payment of Housing Impact Fee, and Vesting Tentative Map, subject to the Conditions of Approval, as further set forth in "Exhibit 8," attached hereto and incorporated herein by this reference.

Exhibits:

1: Initial Study and Addendum to the Dumbarton Transit Oriented Development Specific Plan Environmental Impact Report

2: General Plan Amendment

3: Vesting Tentative Map

4: Specific Plan Amendment

5: Park Agreement Amendment

6: Affordable Housing Regulatory and Satisfaction Agreements

7: Findings of Determination

8: Conditions of Approval

EXHIBIT 1

Conditions of Approval
FMC Willow and Grand Park Project

Planning Division

a) Approval of Vesting Tentative Map 8559 shall be effective at such time the Rezoning of the property within the boundary of the Vesting Tentative Tract Map 8559, takes effect.

b) Approval of Design Review shall be effective at such time of Vesting Tentative Map 8559, is approved.

c) Approval of Minor Use Permit shall be effective at such time of Vesting Tentative Map 8559, is approved.

d) Prior to the issuance of a building permit, the Applicant shall execute the Alternate Compliance Agreement for Housing Impact Fees (Satisfaction Agreement).

e) Prior to issuance of a building permit the Applicant shall enter into a Community Finance Agreement for the Bayside Newark Transit Oriented Development Specific Plan area.

f) The applicant shall execute the Station Parcel and Parking Easement Dedication Agreement concurrent with project approval. The applicant shall deliver convey the Station Parcel and Parking Easement Irrevocable Offer of Dedication (IOD) to the City prior to final map approval. The IOD shall be recorded prior to or concurrently with the final map. The Certificate of Acceptance of the IOD shall be recorded after acceptance of the tract improvements, which includes the Station Parcel interim improvements, or and after issuance of the certificate of occupancy for the 279th market rate residential unit of the project, whichever occurs later.

g) This project is subject to the Bayside Transit Oriented Development Specific Plan policies as implemented by the ordinance and resolution approved by the City Council. All permitted uses and design standards shall abide by the Specific Plan or, for any uses or standards not addressed in the Specific Plan, the underlying zoning district standards apply.

h) Applicant shall execute the revised Grand Park Agreement Amendment and shall provide a revised Irrevocable Offer of Dedication with new boundaries described in Grand Park Agreement Amendment. The Developer is responsible for constructing the park consistent with conceptual design as shown in Exhibit C.

i) Prior to issuance of a building permit, the location and screening design for centralized garbage, refuse, organics, and recycling collection areas (including compactors) for the project shall be submitted for the review and approval of Republic Services, Inc. and the Community Development Director, in that order. Enclosures shall provide signage that states that the enclosure doors shall be closed immediately after use. Enclosures must be located so that the doors, when open, do not encroach into required drive-aisles or parking spaces. No refuse, garbage, organics, or recycling shall be stored outdoors except within the approved trash and recycling enclosures.

j) Prior to the issuance of a Certificate of Occupancy for the project, the Community Development Director shall review and approve signage for consistency with approved plans.

k) Consistent with the General Plan action EH-7.D, prior to issuance of a grading permit, the applicant shall provide evidence to the Community Development Director that the construction equipment would not exceed vibration thresholds.

l) Consistent with General Plan action CS-8.C, prior to issuance of a building permit, the applicant shall prepare and submit to the Community Development Director a solid waste source reduction and diversion program.

m) Prior to the issuance of the final certificate of occupancy for the Project, Applicant shall obtain a variance from the California Regional Water Quality Control Board, San Francisco Bay Region for the P4 Cap that permits the specific improvements for the transit station shown in the "phosphorus vault" area in Figure 7 of the Kimley Horn Report.

n) Construction site trailers and buildings located on-site shall be used for office and storage purposes only and shall not be used for living or sleeping quarters. Any vehicle or portable building brought on the site during construction shall remain graffiti free.

o) Measures to respond to and track complaints pertaining to construction noise shall include: (1) a procedure and phone numbers for notifying the City of Newark Building Inspection Division and Newark Police Department (during regular construction hours and off-hours); and (2) a sign posted on-site pertaining to the permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours).

p) Interior noise levels shall not exceed 45dBa.

q) AC units shall not be placed in front or street side yard and if placed in any other location that makes it visible to public view, shall be properly screened with solid material. Any deviations shall first be approved by the Community Development Director.

r) The project shall be subject to the environmental mitigation measures as described in the Dumbarton TOD Specific Plan Environmental Impact Report.

s) The site and its improvements shall be maintained in a neat and presentable condition, to the satisfaction of the Community Development Director. This shall include, but not be limited to, repainting surfaces damaged by graffiti and site clean-up. Graffiti removal/repainting and site cleanup shall occur on a continuing, as needed basis. Any vehicle or portable building brought on the site during construction shall remain graffiti free.

t) All exterior utility pipes and meters shall be painted to match and/or complement the color of the adjoining building surface, as approved by the Community Development Director.

u) Color elevations shall be submitted by the applicant as part of this application to be reviewed and approved by the Planning Commission and City Council. The building elevations shall reflect all architectural projections such as roof eaves, bay windows, greenhouse windows, chimneys and porches. A site plan showing the building locations with respect to property lines shall also show the projections. Said elevations shall specify exterior materials. Any minor changes shall be submitted for the review and approval of the Community Development Director to assure consistency with the approved project.

v) Prior to the issuance of a building permit, any change to the floor plans as submitted by the applicant as part of this application shall be reviewed and approved by the Planning Commission and City Council. Any minor changes shall be submitted for the review and approval of the Community Development Director to assure consistency with the approved project.

w) Prior to the issuance of a building permit, the roof material as submitted by the applicant as part of this application shall be reviewed and approved by the Community Development Director. All roof material shall consist of fire retardant shake roof, concrete tile, or a roof of similar noncombustible material. Mansard roofs with the above material may be used to screen tar and gravel roofs. All roofs shall be of Class C fire resistant construction or better. Composition shingles shall be Presidential-style or of comparable quality, subject to the review and approval of the Community Development Director.

x) Prior to the issuance of a building permit, the project shall be submitted for the review and approval of Republic Services and the Community Development Director, in that order. The appropriate garbage, refuse and recycling service shall be approved prior to the issuance of a Certificate of Occupancy, as required by the Community Development Director. No refuse, garbage or recycling shall be stored outdoors except within the approved trash and recycling containers.

y) Prior to the issuance of a building permit, a screening design shall be submitted to and approved by the Community Development Director. Roof equipment shall not be visible from public streets. All equipment shall be fully screened within the context of the building's architecture, as approved by the Community Development Director. Said screening design shall be maintained to the satisfaction of the Community Development Director. The building owner shall paint the roof equipment and the inside of its screening wall within the context of the building's color scheme and maintain the painted areas to the Community Development Director's satisfaction.

z) Prior to issuance of a grading permit, the applicant shall hire a qualified biologist to: (1) determine if occupied Burrowing Owl habitat(s) exist on the site, and (2) implement a plan to protect the owls and to excavate the site around any active burrows using hand tools to assure that the owls are not buried during grading in the event Burrowing Owl habitat(s) is found on the site. The occupied Burrowing Owl habitat(s), if found, shall not be disturbed during the nesting season. The Burrowing Owl study shall be conducted not more than 30 days prior to the time site grading activities will commence.

aa) During project construction, if historic, archeological or Native American materials or artifacts are identified, work within a 50-foot radius of such find shall cease and the City shall retain the services of a qualified archeologist and/or paleontologist to assess the significance of the find. If such find is determined to be significant by the archeologist and/or paleontologist, a resource protection plan conforming to CEQA Section 15064.5 shall be prepared by the archeologist and/or paleontologist and approved by the Community Development Director. The plan may include, but would not be limited to, removal of resources or similar actions. Project work may be resumed in compliance with such plan. If human remains are encountered, the County Coroner shall be contacted immediately and the provisions of State law carried out.

bb) There shall be no short-term rentals allowed. Short-term rentals are defined to be a stay of 30 days or less.

cc) There shall be no individual swimming pools allowed.

dd) Prior to their installation, mailbox locations and designs shall be approved by the Community Development Director and Newark Postmaster, in that order. The mailbox compartments of centralized mailboxes shall identify the individual dwelling units with permanent, easily legible lettering.

ee) The covenants, conditions and restrictions (CC&Rs) filed for this development shall include a provision requiring that garages shall only be used for automobile parking.

ff) Prior to the issuance of a Certificate of Occupancy, roll-up garage doors with automatic garage door openers shall be provided for each unit.

gg) Prior to final inspection and utility release for each unit, the applicant shall pre-wire each unit for satellite and cable television connections, as required by the Community Development Director. The exterior connections for the pre-wire shall be made to the roof and not on the side elevation walls of the units.

hh) Prior to the issuance of a sign permit, all signs, other than those referring to construction, sale, or future use of this site, shall be submitted for the review and approval of the Community Development Director.

ii) Prior to the issuance of a building permit, any proposed fence and/or sound wall details shall be submitted for the review and approval of the Community Development Director. This shall also include the proposed masonry sound wall along the perimeter of the northern portion of the project, adjacent to the railroad.

jj) Prior to the issuance of a Certificate of Occupancy, the parking areas, aisles and access drives shall be installed and striped as shown on the approved site plan. Guest parking spaces shall be clearly marked as reserved for guests, as approved by the Community Development Director.

kk) Parking lot cleaning with sweeping or vacuum equipment shall not be permitted between 7:00 p.m. and 8:00 a.m.

ll) Prior to the issuance of a building permit, details of the outdoor recreational amenities such as play structures shall be submitted to the Community Development Director for review and approval.

mm) The Bayside Trail shall be constructed with contiguous phases of development. Prior to the issuance of a Certificate of Occupancy for any non-model dwellings within a phase, the Bayside Trail segment contiguous to that phase shall be completed.

nn) Prior to the issuance of a building permit, the applicant shall pay all the development impact fees except for Housing Impact Fee and Park Impact Fee which shall be per 'Park Agreement' and Affordable Housing Satisfaction Agreement. All other impact fees shall be based on the most current Impact Fee Schedule.

oo) Prior to the transfer of title, the applicant shall provide disclosure notices to buyers of individual dwellings in the subdivisions as to all of the conditions of project approval and environmental determination approved for this project. This information shall include, but is not limited to the anticipated commuter rail, as well as the presence of loud train horns using the railroad tracks to the north of the property.

pp) Prior to the transfer of title for any lot in the development, the applicant shall provide disclosures notices to the buyer as to the possibility of ground borne vibration from trains using the railroad tracks on the north of the subdivision. The method of disclosure shall be subject to review and approval of Community Development Director.

qq) Prior to occupancy, the applicant shall provide clearance for residential occupancy from Californian Regional Water Quality Board San Francisco Region.

rr) Prior to the transfer of title, the applicant shall provide disclosure notices to buyers of dwellings in the subdivisions that they are within a certain number of feet from a fully remediated P4 Cap/vault.

ss) Buildings on corners shall not encroach upon the visibility triangle (40 feet by 40 feet) at intersections.

tt) All lighting shall be directed on-site so as not to create off-street glare.

uu) Applicant shall submit a lighting plan:

a. Multi-Unit Residential Buildings:

i. Lighting in parking areas, garage areas, and carport areas shall be maintained with a minimum of one foot-candle of illumination at the ground level during the hours of darkness.

ii. Aisles, passageways, and recesses related to and within the building complex shall be illuminated with an intensity of at least 0.25 foot-candles at the ground level during the hours of darkness.

b. Nonresidential Buildings. All exterior doors, during the hours of darkness, shall be illuminated with a minimum of 0.5 foot-candle of light.

c. Parking areas designed to accommodate 10 or more vehicles shall be provided with a minimum of one-half foot-candle and a maximum of 3.0 foot-candles of light over of the parking surface during the hours of use from one-half hour before dusk until one-half hour after dawn. 1. Lighting design shall be coordinated with the landscape plan to ensure that vegetation growth will not substantially impair the intended illumination. 2. Parking lot lighting shall, to the maximum extent feasible, be designed and installed so that light and glare is not directed onto residential use areas or adjacent public rights-of-way, consistent with Chapter 17.24, Performance Standards.

d. Photometric plans for the Grand Park shall be in detail and show the neighboring residences are not affected by the lighting.

vv) A monument sign shall be located at the intersection of Willow Street and G Street, in coordination with SamTrans.

ww) The applicant shall incorporate a Homeowner's Association consisting of all property owners of lands in the development at the time of incorporation and in the future for the purpose of maintaining the association's property, common drive aisles, parking facilities, stormwater treatment facilities, and landscaping, including landscaping in adjacent public rights-of-way, and for paying for security lighting, any common garbage collection services, any security patrol services, if provided, and other functions of a Homeowner's Association. All common areas within the development shall be owned and maintained by the Homeowner's Association. Each property owner shall automatically become a member of the association and shall be subject to a proportionate share of the maintenance expenses. The Homeowner's Association shall be incorporated prior to the sale of any individual lots and/or prior to acceptance of tract improvements, whichever occurs first.

xx) Prior to City Council approval of the final map(s), the bylaws governing the property owners' association(s) and any declaration of covenants, conditions and restrictions (CC&Rs) filed for this development shall be reviewed and approved by the City Council at its discretion after mandatory review and recommendations by the City Attorney. Said covenants, conditions and restrictions shall be prominently displayed in the project sales office at all times. Approval of the covenants, conditions and restrictions shall not make the City a party to enforcement of same. The CC&Rs shall apply equally to both owners and renters. The CC&Rs shall be written to require renters to comply with the regulations of the CC&Rs, and a copy of the CC&Rs shall be given to each renter. The CC&Rs shall be written to allow less than a majority of owners to have pavement or landscape maintenance done and the cost thereof assessed to all owners in the project. The CC&Rs shall include a pavement maintenance program for on-site pavement.

yy) The Homeowner's Association CC&Rs shall prohibit the on-site parking of non-self-propelled recreational vehicles, including boats, and any self-propelled recreational vehicles not used for transportation unless separate storage facilities are provided. The CC&Rs shall regulate the provision of any on-site parking of self-propelled recreational vehicles used for transportation.

zz) The applicant shall also assist the Homeowner's Association by having a management consultant firm review the maintenance and operating functions of the association. The management consulting firm shall be responsible to prepare a written report with recommendations to the association for managing the association's obligations and setting initial monthly assessment costs for each lot in the development. Membership and assessment cost shall be mandatory for all property owners of property in the development and shall run with the land. The applicant shall pay all costs of incorporation and initial management review and reports.

aaa) The Homeowner's Association shall be required to contract with a professional management firm to handle all necessary maintenance operations. Documentation of such contract shall be submitted to the City of Newark. All commonly owned facilities shall be properly maintained in a manner consistent with the CC&Rs and project requirements.

Engineering Division

bbb) The development shall require approval of a final tract map filed in accordance with the State Subdivision Map Act and the City of Newark Subdivision Ordinance. The final map must be approved prior to the issuance of any building permits.

ccc) The final map shall designate and/or dedicate emergency vehicle access ways, private vehicle access ways, open space/recreational easements, public utility easements, and other easement as may be required over the common area.

ddd) Existing easements and rights reserved over Hickory Street from the Hickory Street Vacation (Resolution No. 1483) are proposed to be abandoned with the final map. With the first submittal of the final map check, the applicant shall provide the City non-interference letters for the approval of the easement abandonment from each agency that has rights to the existing reserved easements from the Hickory Street Vacation (Resolution No. 1483).

eee) The final map and complete tract improvement plans shall be submitted to the Engineering Division for review to ensure conformance with relevant codes, policies, and other requirements of the Newark Municipal code and City of Newark street

improvement standards. Prior to the approval of the final map, the applicant shall enter into a Subdivision Improvement Agreement and guarantee all necessary public and private street improvements and other infrastructure improvements within the subdivision and beyond the map boundary as required by the City of Newark Subdivision Ordinance. On-site common areas and all private streets in the development shall be designed and constructed to City standards and shall be included with the tract improvement plans.

fff) The applicant shall dedicate right-of-way and install complete street improvements for Enterprise Drive and Willow Street as shown on the Vesting Tentative Map exhibits and as described below:

Enterprise Drive

i. The applicant shall restripe and relocate the curb alignment on the north side of Enterprise Drive (along the project frontage) to provide 1-12' travel lane, 2' buffer lane, 6' bike lane, 7' landscape planter, 12' Bay Trail, and 1' decomposed granite shoulder. Street improvements include, but are not limited to curb, gutter, sidewalk, driveways, landscape, irrigation, utilities, fire hydrants, and street lights. On the south side of Enterprise Drive (along Tract 8459 Compass Bay development), the applicant shall restripe to provide a 1-13' travel lane, 2' buffer lane, 6' bike lane, and 8' parking lane. The applicant shall provide a 2" pavement grind and overlay both sides of Enterprise Drive between Hickory Street and Willow Street at a minimum. Additional pavement rehabilitation may be required as a result of damages from the project's truck traffic. Enterprise Drive improvements shall be completed prior to the first occupancy of the project.

Willow Street

ii. The applicant shall install on the west side of Willow Street (along the project and Hetch-Hetchy frontage) an 8' raised landscaped median, 1-12' travel lane, 2' buffer lane, 6' bike lane, 7' landscape planter, and 12' Bay Trail. Street improvements include, but are not limited to curb, gutter, sidewalk, driveways, landscape, irrigation, utilities, fire hydrants, and streetlights. The applicant shall provide a 2" pavement grind and overlay for the west side of Willow Street between the railroad right-of-way and Enterprise Drive at a minimum. Additional pavement rehabilitation may be required as a result of damages from the project's truck traffic. Willow Street improvements shall be completed prior to the first occupancy of the project.

iii. The applicant shall provide an Unsignalized Intersection LOS analysis report for Willow Street and G Street for the design of the median opening. Final recommendations shall be approved by the City Engineer and shall be

incorporated in the tract improvement plans prior to the first submittal of the plans.

Willow – Enterprise Roundabout

i. Final design of the roundabout configuration at Willow and Enterprise is subject to review by the City's traffic consultant to ensure that the modifications to the roundabout maintain pedestrian, bicyclists, and vehicle safety. The modifications to the roundabout shall meet the recommended guidelines of the National Cooperative Highway Research Program, Roundabouts: An Informational Guide.

ggg) The applicant shall provide additional pavement restoration as a result of utility cuts. At a minimum, the applicant shall provide a 2" pavement grind and overlay to nearest lane line or as required by the City Engineer.

hhh) The applicant shall repair and/or replace any public and private improvements damaged as a result of construction activity to the satisfaction of the City Engineer.

iii) A signpost with a sign having an area of at least 15-inches by 21-inches shall be installed at or near each private street entrance. The name of each private street shall be placed on this sign in clearly legible 4-inch letters. The signs shall have painted, in at least 1-inch letters, "Private Property. Not dedicated for public use."

jjj) The connection between private streets and public street shall be by a City of Newark standard driveway or a City-approved modified driveway.

kkk) Prior to the first submittal of the final map and tract improvement plan check, the applicant shall provide a Pedestrian and Bicycle Safety Plan evaluation for Bayside Community identifying safety improvements. The report shall be reviewed and approved by the City Engineer. Recommended improvements shall be incorporated in the first submittal of the tract improvement plans. The scope of area and study shall be discussed in detail with City staff. The scope of study and area may include, but is not limited to, safer street crossings for the Grand Park, additional bulb-outs, high visible crosswalks, raised crosswalks, Rectangular Rapid Flashing Beacons, additional lighting at Willow and Enterprise roundabout, etc.

lll) Prior to the issuance of the initial grading or any building permits for this project, the applicant shall submit a Storm Water Pollution Prevention Plan for the review and approval of the City Engineer. The plan shall include sufficient details to show how storm water quality will be protected during both: (1) the construction phase of the project and (2) the post-construction, operational phase of the project. The construction phase plan shall

include Best Management Practices from the California Storm Water Quality Best Management Practices Handbook for Construction Activities. The specific storm water pollution prevention measures to be maintained by the contractor shall be printed on the plans. The operational phase plan shall include Best Management Practices appropriate to the uses conducted on the site to effectively prohibit the entry of pollutants into storm water runoff from this site including, but not limited to, trash and litter control, pavement sweeping, periodic storm water inlet cleaning, landscape controls for fertilizer and pesticide applications, labeling of storm water inlets with a permanent thermoplastic stencil with the wording "No Dumping - Drains to Bay," and other applicable practices.

mmm) The project must be designed to include appropriate source control, site design, and stormwater treatment measures to prevent stormwater runoff pollutant discharges and increases in runoff flows from the site in accordance with Provision C.3 of the Municipal Regional Stormwater NPDES Permit (MRP), Order R2-2015-0049, revised November 19, 2015, issued to the City of Newark by the Regional Water Quality Control Board, San Francisco Bay Region. The stormwater treatment design shall be completed by a licensed civil engineer with sufficient experience in stormwater quality analysis and design. The design is subject to review by the Regional Water Quality Control Board. The applicant shall modify the site design to satisfy all elements of Provision C.3 of the MRP. The use of treatment controls for runoff requires the submittal of an executed Stormwater Treatment Measures Maintenance Agreement prior to final map approval, and recordation of the agreement prior to the issuance of any Certificates of Occupancy.

nnn) The project shall be designed to comply with all requirements under Provision C.3.f. of the NPDES permit for limitations on increases of peak storm water runoff discharge rates. The applicant shall be responsible for providing sufficient data and calculations to show that any increase in storm water runoff from the development will not result in increased potential for erosion or other significant adverse impacts of earthen channels downstream of the project site. The required analysis for such findings shall be completed by the applicant to the satisfaction of the City Engineer and the Regional Water Quality Control Board.

ooo) All stormwater treatment measures are subject to review and approval by the Alameda County Mosquito Abatement District. The applicant shall modify the grading and drainage and stormwater treatment design as necessary to satisfy any imposed requirements from the District.

ppp) The entire site shall be equipped with full trash capture devices approved by the Regional Water Quality Control Board – San Francisco Bay Regional and the Mosquito Abatement District, for 100% trash capture at all on-site and adjoining off-site storm drain inlets. All on-site trash capture devices shall be permanently maintained by the property owner. Acceptable off-site trash capture devices shall be found on the City's website at

https://www.newark.org/departments/public-works/engineering-division/stormwater-program.

qqq) The applicant shall submit detailed grading and drainage plans for review and approval by the City Engineer. These plans must be based upon a City benchmark and need to include pad and finish floor elevations of each proposed structure, proposed on-site property grades, proposed elevations at property line, and sufficient elevations on all adjacent properties to show existing drainage patterns. All on-site pavement shall drain at a minimum of one percent. The applicant shall ensure that all upstream drainage is not blocked and that no ponding is created by this development. Any construction necessary to ensure this shall be the applicant's responsibility.

Hydrology and hydraulic calculations and report shall be submitted for review and approval by the City Engineer prior to approval of the final map. The calculations shall show that the City and County freeboard requirements will be satisfied. If the hydrology and hydraulics calculations and report determines that the existing facilities do not have adequate capacity to serve the project, the applicant shall develop a detailed stormwater detention plan on the project site to ensure that discharges from the site do not exceed pre-construction levels.

rrr) Prior to final map approval, the applicant shall enter into a Storm Drainage Easement Agreement permitting stormwater runoff from the public street system to discharge into the privately owned and maintained stormwater treatment systems. The property owner shall accept the maintenance burden associated with all public stormwater runoff in perpetuity.

sss) Where a grade differential of more than a 1-foot is created along the boundary lot lines between the proposed development and adjacent property, the applicant shall install a masonry retaining wall unless a slope easement is approved by the City Engineer. Said retaining wall shall be subject to review and approval of the City Engineer.

ttt) The applicant shall submit a detailed soils report prepared by a qualified engineer, registered with the State of California. The report shall address in-situ and import soils in accordance with the City of Newark Grading and Excavation Ordinance, Chapter 15.50. The report shall include recommendations regarding pavement sections for all public and private streets.

uuu) A grading permit is required by the Building Inspection Division prior to starting site grading work. The applicant’s geotechnical consultant shall review and approve all geotechnical aspects of the project plans to ensure that their recommendations have been properly incorporated. The geotechnical consultant shall inspect, test (as needed), and approve all geotechnical aspects of the project construction. The results of

the inspections and as-built conditions shall be provided in a letter and submitted to the City Engineer for review prior to the grading permit final or tract acceptance, whichever occurs first.

vvv) A truck haul route plan shall be included and approved with the grading permit plans. The applicant shall ensure that the contractors importing/exporting soil adhere to the approved truck haul route. Damages and deterioration of the pavement and roundabout improvements as a result of truck traffic associated with the project shall be repaired, subject to the approval of the City Engineer. It will be the applicant's responsibility to walk with the City inspector and document pre-project existing conditions and post-project conditions.

www) Prior to final map approval, the applicant shall apply for and receive approval of a conditional letter of map revision based on fill (CLOMR-F) from the Federal Emergency Management Agency for buildings within the special flood hazard area (Parcels EE, FF, and KK as shown on the Vesting Tentative Map). The CLOMR-F shall be based upon the grading plan for the project and shall conclude that lots proposed to have structures for human occupancy will be removed from the special flood hazard area.

xxx) Prior to occupancy of any buildings within the special flood hazard area (Parcels EE, FF, and KK as shown on the Vesting Tentative Map), the applicant shall apply for and receive approval of a letter of map revision based on fill (LOMR-F) from the Federal Emergency Management Agency. The LOMR-F shall be based upon the as-built grades of the building pads and shall determine that the pads are no longer within the special flood hazard area.

yyy) The Preliminary Utility Plan includes a water supply system and sanitary sewer system layout that are subject to review and approval by Alameda County Water District (ACWD) and Union Sanitary District (USD), respectively. Any necessary site and utility design changes necessary to satisfy ACWD and USD design requirements shall be the applicant's responsibility.

zzz) Any connections to Alameda County Flood Control District (ACFCD) owned and maintained facilities will require an ACFCD encroachment permit prior to final map approval.

aaaa) Prior to approval of the final map, the applicant shall obtain an approval from the San Francisco Public Utilities Commission for all proposed utility crossings within the Hetch-Hetchy right-of-way and for the frontage improvements within the Willow Street right-of-way. The applicant shall pay all associated costs therewith.

bbbb) As a benefited property within the Dumbarton TOD for the waterline extension on Willow Street, the applicant shall pay its pro-rata benefit cost as outlined in the Waterline Agreement prior to final map approval. If the applicant has paid its pro-rata benefit cost based on the waterline extension estimated costs, the applicant shall pay a supplemental reimbursement for the difference between cost and estimate cost after receipt of the actual cost is provided.

cccc) All existing overhead utilities within the development and along the project street frontage on Willow Street and Enterprise Drive shall be undergrounded to the nearest riser beyond the development's limits in accordance with the City of Newark Subdivision Standards. Undergrounding shall include all existing and proposed service drops.

dddd) All new utilities including, but not limited to, electric, telephone and cable television services shall be provided underground for all buildings in the development in accordance with the City of Newark Subdivision Standards. The applicant shall apply for an exception with PG&E to install electrical transformers in underground vaults with an appropriate public utility easement or within the public right-of-way.

eeee) Dry utility boxes, except for street light boxes, shall not be placed in the landscape planter strips adjacent to the public street. Instead, dry utility boxes shall be placed behind the sidewalk within a public utility easement area.

ffff) The joint trench plan shall be submitted with the first tract improvement plan review and approved prior to final map approval.

gggg) Any proposed utility connections and/or underground work within structurally sound street pavement must be bored or jacked. Open street cuts will not be permitted on Enterprise Drive and Willow Street unless the affected area is scheduled for a pavement overlay concurrent with site development.

hhhh) The applicant shall request Pacific, Gas & Electric Co. to commence with the design of the underground utility improvements for the proposed development immediately following approval of the tentative map.

iiii) Street lighting for public and private streets shall have sufficient power and spacing to provide a minimum maintained foot-candle level of 0.12. Photometrics shall be submitted with the first submittal of the tract improvement plans.

jjjj) The applicant shall ensure that a water vehicle for dust control operations is kept readily available at all times during construction at the City Engineer's direction. A pick-up or vacuum type street sweeper shall be available at all times at the direction of the City Engineer to removed tracked dirt and debris from adjacent streets.

kkkk) The applicant shall implement the following measures for the duration of all construction activity to minimize air quality impacts:

1. Watering should be used to control dust generation during demolition of structures and break-up of pavement.
2. All trucks hauling demolition debris from the site shall be covered.
3. Dust-proof chutes shall be used to load debris into trucks whenever feasible. Watering should be used to control dust generation during transport and handling of recycled materials.
4. All active construction areas shall be watered at least twice daily and more often during windy periods; active areas adjacent to the existing land uses shall be kept damp at all times or shall be treated with non-toxic stabilizers or dust palliatives.
5. All trucks hauling soil, sand, and other loose materials shall be covered or require all trucks to maintain at least 2 feet of freeboard.
6. All unpaved access roads, parking areas, and staging areas at construction sites shall be paved, watered three times daily, or treated with (non-toxic) soil stabilizers.
7. All paved access roads, parking areas, and staging areas at construction sites shall be swept daily with water sweepers; water sweepers shall vacuum up excess water to avoid runoff-related impacts to water quality.
8. Limit traffic speeds on unpaved roads to 15 mph.
9. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
10. Replant vegetation in disturbed areas as quickly as possible.
11. Minimize idling time (5 minutes maximum).
12. Maintain properly tuned equipment.

These measures shall be incorporated into the grading specifications as well as the best management practices of the storm water pollution prevention plan, and shall be implemented to the satisfaction of the City Engineer.

llll) The applicant shall provide all required paper and digital submittals of the tentative map, project final map, tract improvement plans, and as-built plans as required by the City Engineer. Digital copies of the final map and improvement plans shall be prepared in accordance with Union Sanitary District digital submittal standards.

mmmm) The plans submitted for construction must be drawn to an appropriate scale as required by the City Engineer.

nnnn) The applicant shall enter into a Landscape Maintenance Agreement to ensure the perpetual maintenance of all common front yard, side yard, back-up area landscaping, and adjacent roadway planter strips and red curbs within the development by the Homeowner's

Association. This agreement shall run with the land and be binding upon all future owners or assigns. Any and all necessary easements shall be dedicated over individual lots to allow for the perpetual access and maintenance of landscaping. The full extent of landscape maintenance shall be determined with the future landscape improvement plans and detailed in said agreement. Landscaping by the City at the expense of the Homeowner's Association in these areas will only occur in the event the City Council deems the Homeowner's Association maintenance to be inadequate. Project perimeter walls and adjoining landscaped areas shall be included in a dedicated landscape easement to guarantee adequate maintenance of the walls.

oooo) Prior to the approval of the final map, the applicant shall petition the City Council to participate in an active Landscaping and Lighting District for the perpetual maintenance of median landscaping and lighting systems on Willow Street and Enterprise Drive, roundabout landscaping, Grand Park landscaping, any public stormwater treatment and storm drain delivery systems including trash capture devices, all public street trees, and all street lighting systems. Maintenance activities will be performed by the City of Newark or its contractors through the Landscaping and Lighting District. All property owners within the tentative map boundary shall be assessed annually in accordance with requirements established with the Landscaping and Lighting District. The applicant shall deposit sufficient funds for the City to hire a consultant to prepare the Engineer's Report, which shall be approved by the City Council. Prior to issuance of a Certificate of Occupancy, the City Council shall adopt a resolution for the annexation into an assessment district. The applicant shall record an indenture advising all prospective property owners in the project that their properties are included in a Landscaping and Lighting District for maintenance of landscaping, lighting, and related improvements installed as part of the project.

pppp) Prior to final map approval, street names shall be reviewed, approved, and shown on the final map. The street names shall be unique and in keeping with the theme of the development. A unique street name is defined as one which does not duplicate or is similar (i.e. such as pronunciation or spelling) to any existing/reserved street names located in the Cities of Newark, Fremont, and Union City.

qqqq) The applicant shall provide digital submittals of the final map and tract improvement plans in a format approved by the City prior to final map approval. The CAD work must be prepared consistent with the City of Fremont Digital Submittal Requirements.

rrrr) The applicant shall provide electronic copies and one mylar set of as-built tract improvement plans prior to tract acceptance.

ssss) Prior to issuance of a Certificate of Occupancy or release of utilities for any building, vehicle access ways and parking facilities serving said building shall be paved in

accordance with the recommendation of a licensed engineer based on a Traffic Index of 5.0 and striped as shown on the approved site plan.

tttt) Prior to issuance of a Certificate of Occupancy or release of utilities for each dwelling unit, the on-site drive aisles and uncovered parking facilities shall be installed and striped as shown on the approved site plan. All on-site uncovered parking facilities and drive aisles shall be drained at a minimum slope of 1.0% for asphalt surfaces and 0.3% for Portland cement concrete surfaces.

uuuu) The Homeowner's Association shall be responsible for trash and litter control and sweeping of all private streets within the development. All private storm drain systems and all associated trash capture devices shall be cleaned on a regularly scheduled basis as detailed in the required Stormwater Treatment Measures Maintenance Agreement.

Landscape Division

vvvv) All maintenance of common areas, common area facilities, site frontage areas, and all red curbing within the development shall be maintained by the required homeowner's association. The applicant shall enter into a Landscape Maintenance Agreement prior to approval of the final map. The agreement shall run with the land and be binding to the homeowners association as successors.

wwww) The applicant shall retain a licensed landscape architect to prepare working drawings for all frontage area and common area landscape improvements in accordance with City of Newark requirements and the State of California Model Water Efficient Landscape Ordinance. The landscape plans shall be included with the first tract improvement plan set. The landscape plans shall be concurrently approved with the tract improvement plans and final map.

xxxx) All street trees shall be a minimum of 24-inch box specimens. All plant replacements shall be equal or better standard than originally approved subject to approval by the City Engineer.

yyyy) Landscaping and irrigation systems shall be installed on Enterprise Drive and the roundabouts prior to the first occupancy of the project.

zzzz) Prior to the release of utilities or issuance of any Certificate of Occupancy, all landscaping and irrigation systems on the lot and lot frontage areas shall be complete. Cash deposit to guarantee remainder of the work can be accepted subject to the City Engineer approval.

aaaaa) Stormwater treatment facilities and associated infrastructure shall be installed and operational prior to the occupancy of the buildings for said treatment measures. A

certification by a licensed civil engineer and/or licensed landscape architect certifying that the stormwater treatment facilities and associated infrastructure were installed and are operating properly shall be submitted to the City and approved by the City Engineer.

bbbbb) All landscaping shall comply with the Newark Zoning Ordinance, Chapter 17.21.

a. 50 percent of all trees shall be evergreen species.

b. Landscaped areas may include paved or graveled surfaces, provided they do not cover more than 30 percent of the area required to be landscaped.

c. No more than 25 percent of the landscaped area may be turf.

d. A minimum of 10 percent of the parking lot area for the commercial mixed use shall be landscaped.

e. A landscaped island at least six feet in all interior dimensions and containing at least one 24-inch box tree shall be provided at each end of each interior row of parking stalls and between every six consecutive parking stalls.

Building Division

ccccc) Construction for this project, including site work and all structures, can occur only between the hours of 8:00 AM and 7:00 PM, Monday through Saturday and between the hours of 10:00 AM and 6:00 PM on Sundays and holidays. The applicant may make a written request to the Building Official for extended working hours and/or days. In granting or denying any request the Building Official will take into consideration the nature of the construction activity which would occur during extended hours/days, the time duration of the request, the proximity to residential neighborhoods and input by affected neighbors. All approvals will be done so in writing.

ddddd) Each building shall be equipped with a fully automatic fire sprinkler system.

eeeee) This project will require the payment of school applicant fees. School applicant fees are assessed and collected by the Newark Unified School District

Fire Division

fffff) Depending on the construction type and occupancy classification NFPA 13 fire sprinkler system may be required.

ggggg) There will need to be a continuous fire access road west of "A" way and connect to Enterprise Drive. Or provide an approval fire turnaround in accordance with CFC Appendix D.

hhhhh) Additional fire land striping or signage will be required.

iiiii) Additional fire hydrant will be required at the west end of "A" way.

jjjjj) Fire hydrant outside building 9 may need to be relocated.

Police Division

kkkkk) The development shall comply with Chapter 15.06, *Security Code*, of the Newark Municipal Code and Section 5.10 of the California Fire Code for radio reception.

llllll) Housing numbers should be well placed, illuminated and easily recognizable for first responders.

mmmmm) A map of the entire complex should be placed in easy to find locations (preferred-street entrance into the complex) to aid first responders in locating specific dwelling.

Parks & Recreation

nnnnn) The communication tower, for security reasons, shall be enclosed with a 6-foot wrought iron fence. The fencing should be in line with current plans and shall not block or take away from the overall aesthetic feel.

ooooo) Based on the park's planned usage, the bathroom shall be designed to serve up to 350 users per hour or as approved by the Recreation and Community Services Manager. It shall also consist of anti-vandalism features.

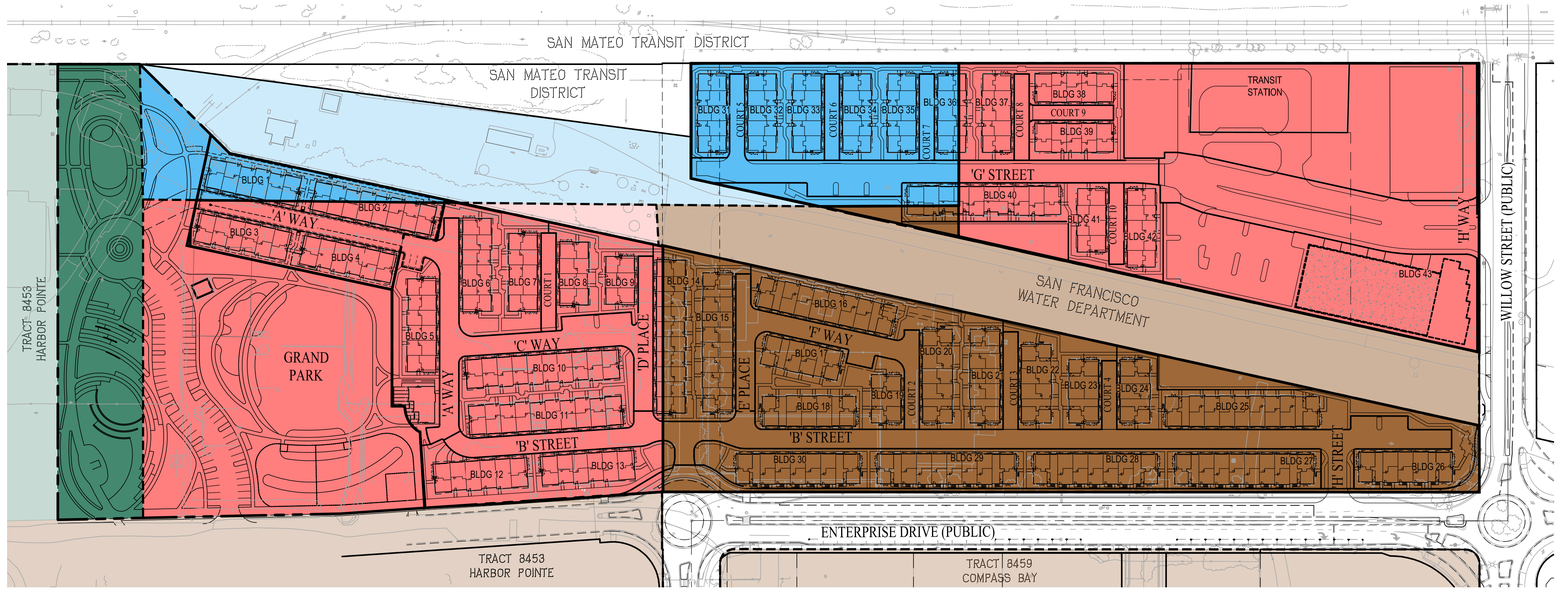
ppppp) The playground equipment shown in the Grand Park, identified on page L2 of project plans shall be of high quality and be all-inclusive playground equipment similar to the Skyward Stroll by PlayCore company, Jungle Giant by Kompan, Palace Giant by Kompan or similar type size playground system for high volume children play areas. The final option shall be subject to review by the Community Development Director.

General

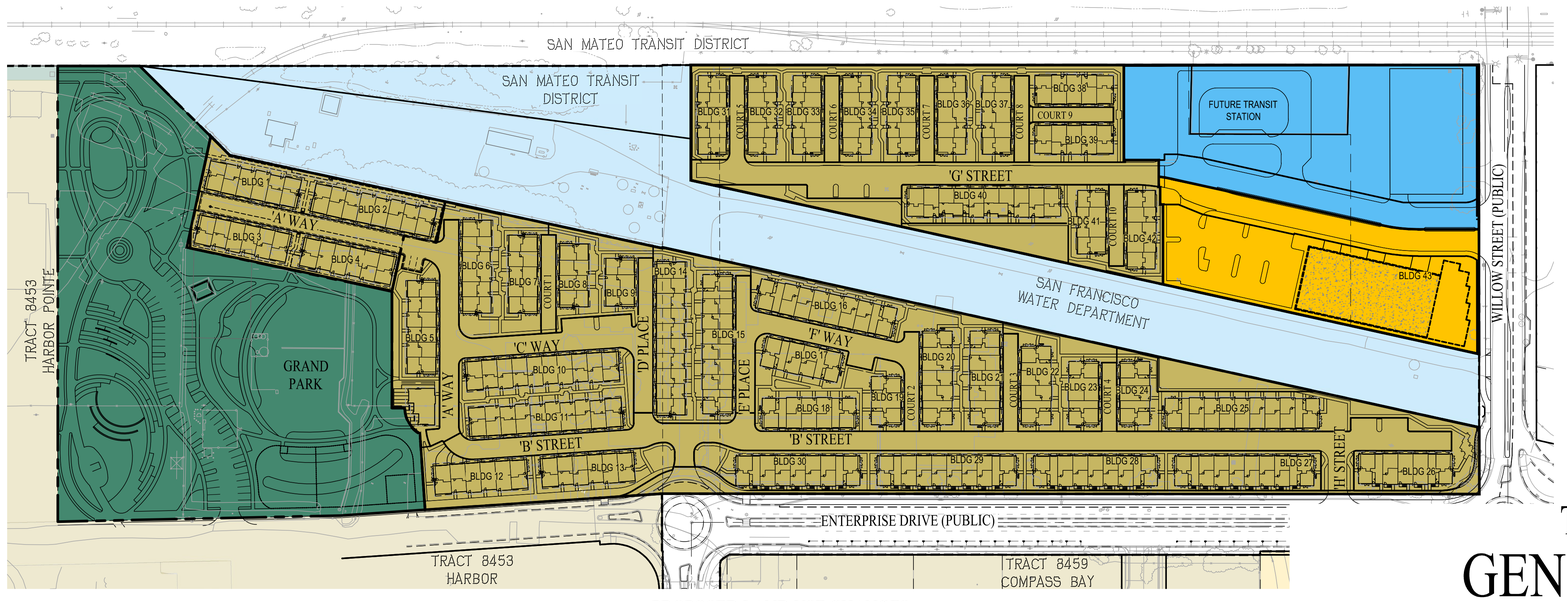
qqqqq) All proposed changes from approved exhibits shall be submitted to the Community Development Director who shall decide if they warrant Planning Commission and City Council review and, if so decided, said changes shall be submitted

for the Commission's and Council's review and decision. The applicant shall pay the prevailing fee for each additional separate submittal of development exhibits requiring Planning Commission and/or City Council review and approval.

rrrrr) In the event that any person should bring an action to attack, set aside, void or annul the approval of all entitlements related to the FMC Willow and Grand Park project, the applicant shall defend, indemnify and hold harmless the City and/or its agents, officers and employees from any claim, action, or proceeding against the City and/or its agents, officers and employees with separate counsel reasonably selected by the City and reasonably approved by the applicant. Applicant's obligation to defend, indemnify and hold harmless the City and/or its agents, officers and employees shall be subject to the City's compliance with Government Code Section 66474.9.



ORIGINAL LAND USE PER GENERAL PLAN



PROPOSED LAND USE CHANGES

ORIGINAL GENERAL PLAN LAND USE VS PROPOSED LAND USE			
LAND USE CATEGORY	ORIGINAL LAND USE (PER GENERAL PLAN)	PROPOSED LAND USE	PROPOSED LAND USE CHANGE
PUBLIC INSTITUTIONAL	2.2 AC±	2.10 AC±	(0.10) AC±
COMMERCIAL/MIXED USE	0.0 AC	1.60 AC±	1.60 AC±
COMMUNITY COMMERCIAL	12.3 AC±	0.00 AC±	(12.30) AC±
MEDIUM DENSITY RESIDENTIAL	0.0 AC	13.35 AC±	13.35 AC±
HIGH DENSITY RESIDENTIAL	5.90 AC±	0.00 AC±	(5.90) AC±
PARKS & RECREATION FACILITY	1.7 AC±	5.05 AC±	3.35 AC±
TOTAL	**22.1 AC±**	**22.1 AC±**	**0.00 AC±**

LEGEND

- PUBLIC-INSTITUTIONAL
- PARKS & RECREATION FACILITY
- COMMUNITY COMMERCIAL
- COMMERCIAL/MIXED USE
- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL

TRACT 8559
GENERAL PLAN LAND USE CHANGES
FMC WILLOW

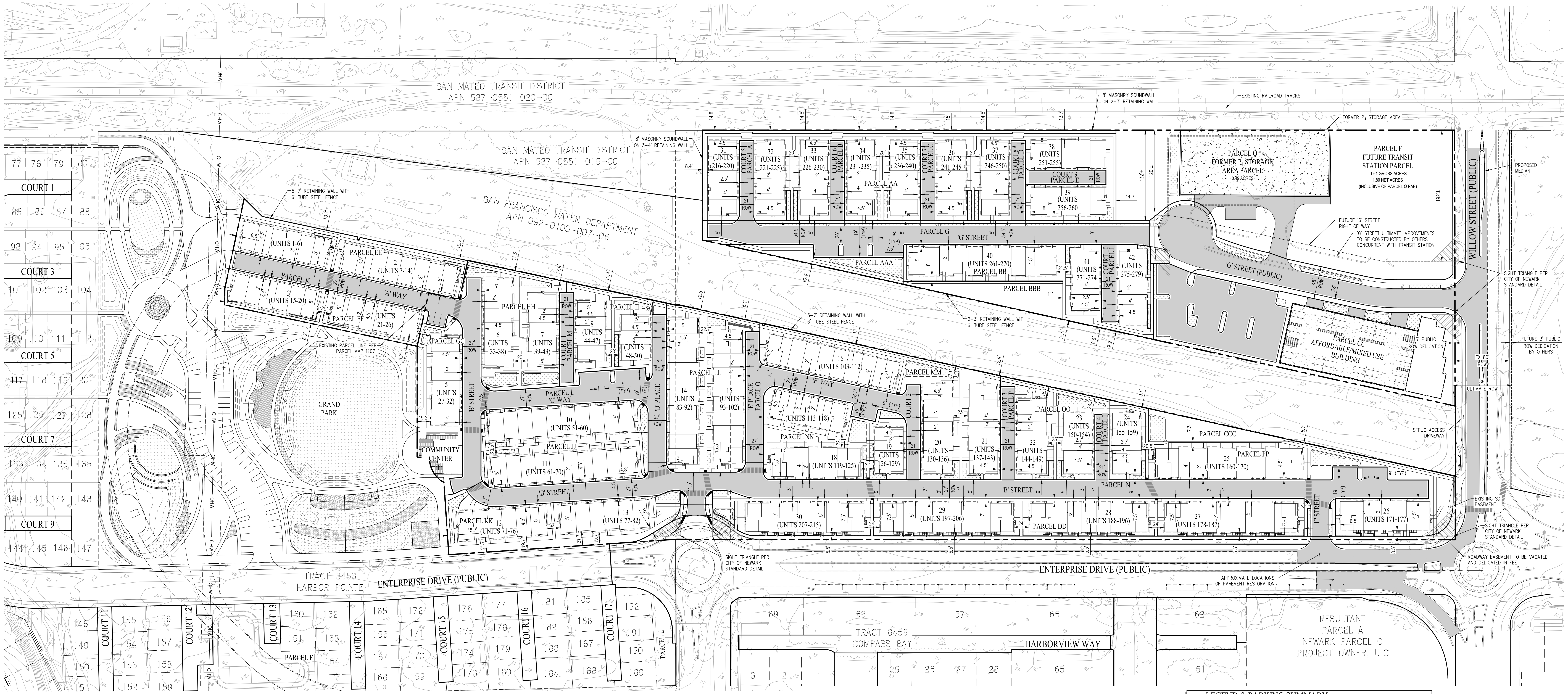
CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

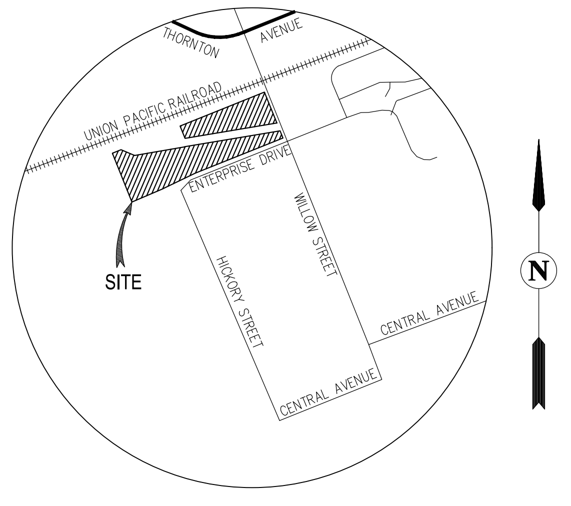
SCALE: 1"=100' DATE: JULY 5, 2022

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SAN RAMON ▪ (925) 866-0322
SACRAMENTO ▪ (916) 375-1877
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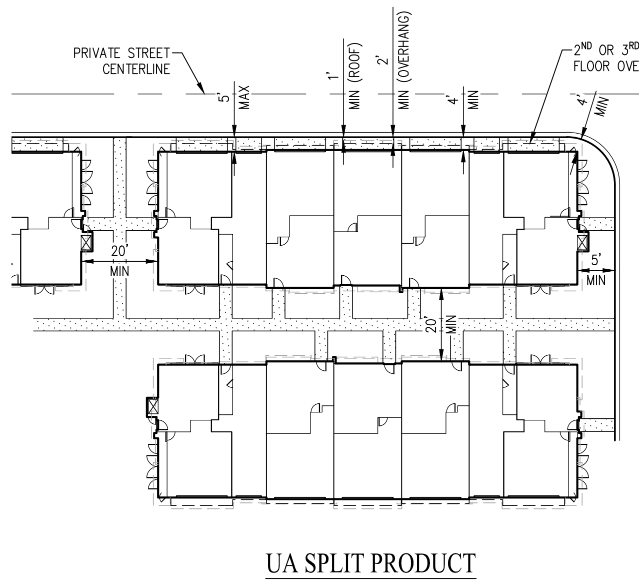


VICINITY MAP

NOT TO SCALE

GENERAL NOTES:

1. OWNER: FMC/DEVELOPER: THE WILLOW PROJECT OWNER, LLC
   888 SAN CLEMENTE DRIVE, SUITE 100
   NEWPORT BEACH, CA 95831
   CONTACT: EVAN KNAPP
   (949) 720-3612
2. CIVIL ENGINEER: CARLSON, BARBEE & GIBSON, INC.
   2633 CAMINO RAMON, SUITE 350
   SAN RAMON, CA 94583
   CONTACT: JUSTIN DEKNOBLOUGH, R.C.E. 79604
   (925) 866-0322
3. SOILS ENGINEER: ENGEO
   1630 SAN PABLO AVENUE, SUITE 200
   OAKLAND, CA, 94612
   CONTACT: CAROLINE HAATVEIT
   (510) 451-1255
   (888) 279-2698 (FAX)
4. EXISTING USE: VACANT
5. TOTAL SITE AREA (INCLUDING GRAND PARK AND TRANSIT STATION): 22.1± ACRES
   SUBDIVISION AREA: 17.1± ACRES
   DEVELOPABLE AREA: 15.3± ACRES
6. NUMBER OF UNITS
   WILLOW SOUTH: 215 UNITS
   WILLOW NORTH: 64 UNITS (FOR SALE)
   FOR SALE UNIT COUNT: 279 UNITS
   AFFORDABLE: 91 UNITS
   TOTAL UNIT COUNT: 370 UNITS
7. THIS PROPERTY LIES IN THE JURISDICTION OF:
   FIRE PROTECTION
   ALAMEDA COUNTY FIRE DEPARTMENT
   DOMESTIC WATER
   ALAMEDA COUNTY WATER DISTRICT
   SANITARY SEWER
   UNION SANITARY DISTRICT
   STORM DRAIN WITHIN PUBLIC STREETS
   CITY OF NEWARK
   STORM DRAIN WITHIN PRIVATE PLACES, WAYS & COURTS
   FUTURE HOMEOWNERS ASSOCIATION
   GAS & ELECTRIC SERVICE
   PACIFIC GAS & ELECTRIC
   TELEPHONE SERVICE
   AT&T
8. ROADWAYS AND PARCELS: UNLESS OTHERWISE NOTED (I.E. PUBLIC) ALL ROADWAYS AND PARCELS ARE TO BE MAINTAINED BY THE HOA ESTABLISHED WITH THE PROJECT.
9. PROPOSED LAND USE SUMMARY: SEE TABLE (THIS SHEET)
10. ASSESSORS PARCEL NUMBERS: 537-0852-001-08
    537-0852-002-09
    092-0100-005
11. PROPERTY DESCRIPTION: NORTH: PARCEL 1 AND 2 OF PARCEL MAP 11071, FILED DECEMBER 11, 2020 BOOK 348, PAGE 32, OF PARCEL MAPS, ALAMEDA COUNTY RECORDS.
    SOUTH: PARCEL 1 AND 2 OF PARCEL MAP 11071, FILED DECEMBER 11, 2020 BOOK 348, PAGE 34, OF PARCEL MAPS, ALAMEDA COUNTY RECORDS.
12. BENCHMARK: CITY OF NEWARK OFFICIAL BENCHMARK NO. 62, ALSO BEING AN ALAMEDA COUNTY BENCHMARK, THE TOP OF CURB AT STORM WATER INLET AT THE NORTH-EAST CORNER OF THORNTON AVENUE AT WILLOW STREET, ELEVATION TAKEN AS 8.661 NGVD 29 PER CITY OF NEWARK RECORDS.
13. TOPOGRAPHY: PREPARED BY GEOMAPS INC. DATED MAY 4, 2017, REVISED 9/2021
14. FLOOD ZONE: ZONED X AND AE
    FLOOD INSURANCE RATE MAP (FIRM)
    COMMUNITY PANEL NUMBER: 06001C 0443 G
15. THIS PROJECT MAY BE BUILT IN PHASES AND MULTIPLE FINAL MAPS MAY BE FILED. A PHASING PLAN WILL BE PROVIDED TO THE CITY OF NEWARK PRIOR TO FINAL MAP APPROVAL.
16. PARCELS A-E, G-P ARE FOR PRIVATE STREETS.
    PARCEL F IS FOR THE TRANSIT STATION.
    PARCELS AA, BB, DD-PP ARE FOR MULTI-FAMILY RESIDENCES.
    PARCELS CC IS FOR MIXED USE.
    PARCELS AAA-DDD ARE FOR OPEN SPACE.
17. NUMBER OF LETTERED PARCELS: 36
18. LOT DIMENSIONS AND AREAS ARE APPROXIMATE AND ARE ROUNDED TO THE NEAREST WHOLE NUMBER. EXACT DIMENSIONS AND AREAS WILL BE PROVIDED ON THE FINAL MAP.
19. ALL BUILDINGS SHALL BE EQUIPPED WITH AN AUTOMATIC FIRE SPRINKLER SYSTEMS AS REQUIRED BY CHAPTER 15.09.020.G OF THE NEWARK MUNICIPAL CODE.
20. GRADING SHOWN IS PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL DESIGN.
21. ALL UTILITIES SHOWN ARE PRELIMINARY AND SUBJECT TO CHANGE DURING FINAL DESIGN.
21. GENERAL PLAN DESIGNATION: MEDIUM/HIGH DENSITY RESIDENTIAL (PORTION)
    COMMERCIAL/MIXED USE (PORTION)
    TRANSIT STATION (PORTION)
22. ZONING: EXISTING: BTP - BUSINESS & TECHNOLOGY PARK
    PROPOSED: MEDIUM/HIGH DENSITY RESIDENTIAL - FORM BASED CODE
    HIGH DENSITY RESIDENTIAL - FORM BASED CODE
    COMMERCIAL/MIXED USE - FORM BASED CODE
23. SITE COVERAGE: 62%



UA SPLIT PRODUCT
TYPICAL SETBACKS
(BLDG 15-30)

NOT TO SCALE

ABBREVIATIONS

AC	ACRES	OHW	OVERHEAD WIRE
AD	AREA DRAIN	P	PAD
BC	BACK OF CURB	ℙ	PROPERTY LINE
BU	BUBBLE UP	PAE	PUBLIC ACCESS EASEMENT
BW	BACK OF WALK	PUE	PUBLIC UTILITY EASEMENT
℄	CENTER LINE	PSYE	PRIVATE YARD EASEMENT
DW	DRIVEWAY	ROW	RIGHT OF WAY
EL	ELEVATION	SD	STORM DRAIN
EVAE	EMERGENCY VEHICLE ACCESS EASEMENT	SF	SQUARE FEET
EX	EXISTING	SS	SANITARY SEWER
FC	FACE OF CURB	SSE	SANITARY SEWER EASEMENT
FG	FINISHED GRADE	SW	SIDEWALK
FL	FLOWLINE	TBC	TOP OF BEVELED CURB
GLIP	GARAGE LIP	TC	TOP OF CURB
HP	HIGH POINT	USD	UNION SANITARY DISTRICT
LL	LOT LINE	W	WATER
LP	LOW POINT	WLE	WATER LINE EASEMENT
MC	MEDIAN CURB	WQ	WATER QUALITY
		WQP	WATER QUALITY PUMP

LEGEND

- PROPERTY BOUNDARY
- PROPOSED RIGHT OF WAY
- PROPOSED LOT LINE
- PROPOSED TOP OF VERTICAL CURB
- PROPOSED TOP OF BEVELED CURB
- PROPOSED SIDEWALK
- PROPOSED LIP OF GUTTER
- PROPOSED EASEMENT
- 185 PROPOSED BUILDING NUMBER
- PROPOSED 20 FOOT TRAIL CORRIDOR
- PROPOSED WATER QUALITY AND BIORETENTION AREA
- EXISTING PARCEL LINE
- EXISTING EASEMENT
- —— OHW —— EXISTING OVERHEAD WIRE
- FUTURE RIGHT OF WAY
- FUTURE LOT LINE
- FUTURE TOP OF VERTICAL CURB
- FUTURE TOP OF BEVELED CURB
- FUTURE SIDEWALK
- FUTURE LIP OF GUTTER
- 185 FUTURE LOT NUMBER
- PARALLEL PARKING STALL

CHAPTER 17.13 FORM BASED CODE (FBC) OVERLAY DISTRICT

17.13.030 MAXIMUM HEIGHT AND REQUIRED SETBACKS BY STREET	
A. TRANSIT STATION ENTRANCE ROAD	
1. MAXIMUM HEIGHT:	6 STORIES OR 75 FEET
2. FRONT YARD:	0-10 FEET
3. STREET SIDE YARD:	0-10 FEET
B. ENTERPRISE DRIVE (NORTH SIDE; FROM WILLOW TO HICKORY)	
1. MAXIMUM HEIGHT:	6 STORIES OR 75 FEET
2. FRONT YARD:	0-20 FEET
3. STREET SIDE YARD:	5-10 FEET
C. WILLOW STREET	
1. MAXIMUM HEIGHT:	4 STORIES OR 50 FEET
2. FRONT YARD:	10-25 FEET
3. STREET SIDE YARD:	8'-3" - 15 FEET
4. MAXIMUM PERCENT OF BUILDING AT MINIMUM SETBACK LINE:	80%
D. ALL NEIGHBORHOOD STREETS	
1. MAXIMUM HEIGHT:	4 STORIES OR 50 FEET
2. FRONT YARD:	10-18 FEET
3. STREET SIDE YARD:	5 FEET
4. MAXIMUM PERCENT OF BUILDING AT MINIMUM SETBACK LINE:	80%

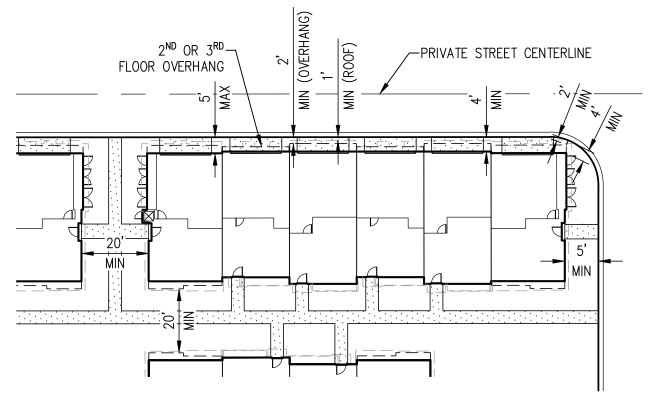
TABLE 17.13.040.B : DEVELOPMENT STANDARDS - COMMERCIAL, OFFICE, AND MULTI-UNIT DEVELOPMENT

STANDARD	MULTI-UNIT
A. BUILDING FORM	
MAXIMUM LENGTH OF BUILDING FACADE WITH NO COURTYARD BREAK:	300 FEET
MAXIMUM BUILDING DEPTH	N/A
B. SETBACKS	
FROM PUBLIC RIGHT OF WAY	
PORCHES/STOOPS/BALCONIES	10 FEET
BUILDING	15 FEET
FROM OTHER BUILDINGS ON-SITE	
RESIDENTIAL BUILDINGS	
FRONT TO FRONT	19 FEET
SIDE TO SIDE	10 FEET
FRONT TO SIDE	15 FEET
COMMUNITY OR SERVICE BUILDINGS	25 FEET
NONRESIDENTIAL BUILDINGS	N/A
CARPORTS	15 FEET
FROM NON-STREET PROPERTY LINE	
OF SINGLE-UNIT DWELLING, ATTACHED OR MULTI-UNIT LOT	15 FEET
OF SINGLE-UNIT DWELLING, DETACHED LOT	30 FEET
NONRESIDENTIAL BUILDINGS	N/A
FROM ON-SITE PARKING, DRIVE AISLE, OR LANE	5 FEET

NOTES:
1. ALL DIMENSIONS IN FEET UNLESS OTHERWISE NOTED

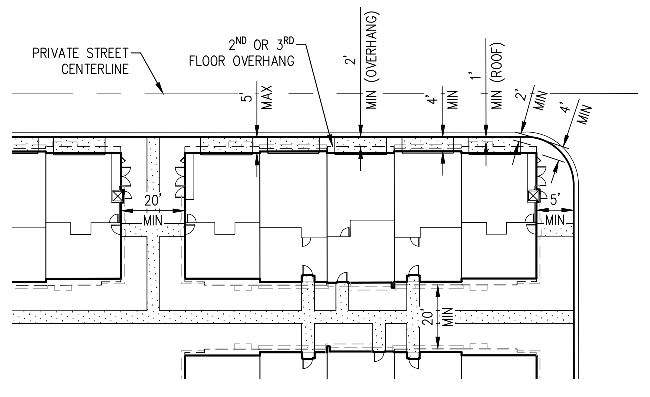
17.13.050 : PARKING

E. DESIGN GUIDELINES
5. TO DISCOURAGE OBSTRUCTION OF THE DRIVEWAY, GARAGE APRONS SHALL BE EITHER LESS THAN FIVE FEET DEEP OR MORE THAN EIGHTEEN FEET DEEP AS MEASURED FROM PROPERTY LINE. THE DEEPER PARKING APRONS SHOULD BE LIMITED TO THE REAR UNITS; HOWEVER, THEY CAN BE VISIBLE FROM THE STREET. PARKING SHALL NOT BE ALLOWED ON APRONS THAT ARE LESS THAN FIVE FEET.



UA TOWN PRODUCT
TYPICAL SETBACKS
(BLDG 1-14)

NOT TO SCALE



UA STACK PRODUCT
TYPICAL SETBACKS
(BLDG 31-43)

NOT TO SCALE

LEGEND & PARKING SUMMARY

PARKING REQUIRED		
MULTI-FAMILY		
OFF-STREET COVERED SPACES PER UNIT (2 PER UNIT) = (279 X 2) =	558	SPACES
GUEST SPACES* = 0.5 SPACES PER UNIT = (279 X 0.5) =	140	SPACES
SUBTOTAL MULTI-FAMILY PARKING REQUIRED =	698	SPACES
TRANSIT STATION PROXIMITY PARKING REDUCTION		
20% REDUCTION (FOR PROXIMITY TO TRANSIT STATION) = (0.20 X 698) =	(140)	SPACES
SUBTOTAL MULTI-FAMILY PARKING REQUIRED (WITH REDUCTION)=	558	SPACES
AFFORDABLE/MIXED USE PARKING REQUIRED		
RETAIL SPACES (3 PER 1,000 SF GREATER THAN 5,000SF) 3,600SF =	0	SPACES
AFFORDABLE HOUSING (1.5 SPACES/1 BED;2 SPACES/2-3 BED) =	163	SPACES
SUBTOTAL AFFORDABLE/MIXED USE PARKING REQUIRED =	163	SPACES
AFFORDABLE PARKING REDUCTION		
DENSITY BONUS REDUCTION TO 1 SPACE PER AFFORDABLE UNIT =	(72)	SPACES
SUBTOTAL AFFORDABLE/MIXED USE PARKING REQUIRED (WITH DENSITY BONUS) =	91	SPACES
TOTAL PARKING REQUIRED (WITH REDUCTIONS)=	**649**	**SPACES**
PARKING PROVIDED		
MULTI-FAMILY		
OFF-STREET COVERED SPACES (279 X 2) =	558	SPACES
GUEST SPACES		
ON-STREET SPACES (IN-TRACT) =	40	SPACES
ON-STREET SPACES (OFF-SITE) =	32	SPACES
SUBTOTAL MULTI-FAMILY PARKING PROVIDED =	630	SPACES
AFFORDABLE/MIXED USE PARKING PROVIDED		
UNCOVERED RETAIL SPACES =	9	SPACES
GARAGE AFFORDABLE SPACES =	50	SPACES
UNCOVERED AFFORDABLE SPACES =	41	SPACES
SUBTOTAL AFFORDABLE/MIXED USE PARKING PROVIDED =	100	SPACES
TOTAL PARKING PROVIDED =	**730**	**SPACES**

PARKING NOTES:
(1) ON-STREET PARALLEL SPACES MINIMUM DIMENSIONS: 8 FEET BY 20 FEET.
(2) PERPENDICULAR SPACES MINIMUM DIMENSIONS: 9 FEET BY 19 FEET.
(3) HANDICAP SPACES MINIMUM DIMENSIONS: 9 FEET BY 19 FEET.
(4) PARKING REDUCTIONS ARE BASED ON THE CITY OF NEWARK ZONING CODE SECTION 17.23.050.

LAND USE SUMMARY

LAND USE	AREA (AC)
MULTIFAMILY RESIDENTIAL	9.37
MIXED USE/AFFORDABLE	1.15
WATER QUALITY	0.53
PUBLIC RIGHT-OF-WAY DEDICATION	1.04
PRIVATE STREETS	3.16
GRAND PARK	5.05
TRANSIT STATION	1.80
TOTAL AREA WITHIN BOUNDARY	**22.1**

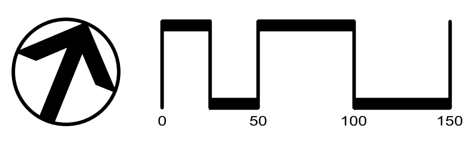
NOTES:
1. REQUIRED SETBACKS ARE BASED ON TABLE IN SECTION 17.13.040 OF THE CITY'S 2018 ZONING CODE UNLESS OTHERWISE NOTED.
2. PER SECTION 17.13.040.A.6, THE SETBACK MAY BE REDUCED TO 4 FEET TO THE GARAGE DOOR. THE SETBACK TO LIVING SPACE ON SECOND & THIRD FLOORS MAY BE REDUCED TO 2 FEET FROM THE EDGE OF THE ALLEY.
3. PER SECTION 17.13.030, PARAGRAPH H STATES NEIGHBORHOOD STREET SIDEYARD MINIMUM SHALL BE 5 FEET.
4. PER TABLE 17.17.090 ALLOWED PROJECTIONS INTO REQUIRED YARDS AND BUILDING SEPARATIONS, MAY ENCROACH UP TO 3 FEET INTO THE SETBACK.

SHEET INDEX

- TM-1 TITLE SHEET AND SITE PLAN
- TM-2 EXISTING SITE CONDITIONS
- TM-3 PRELIMINARY LOTTING PLAN AND STREET SECTIONS
- TM-4 PRELIMINARY GRADING AND DRAINAGE PLAN
- TM-5 PRELIMINARY UTILITY PLAN
- TM-6 PRELIMINARY STORMWATER CONTROL PLAN
- TM-7 FIRE ACCESS PLAN

TRACT 8559
VESTING TENTATIVE MAP
FOR CONDOMINIUM PURPOSES
TITLE SHEET AND SITE PLAN
FMC WILLOW AND GRAND PARK

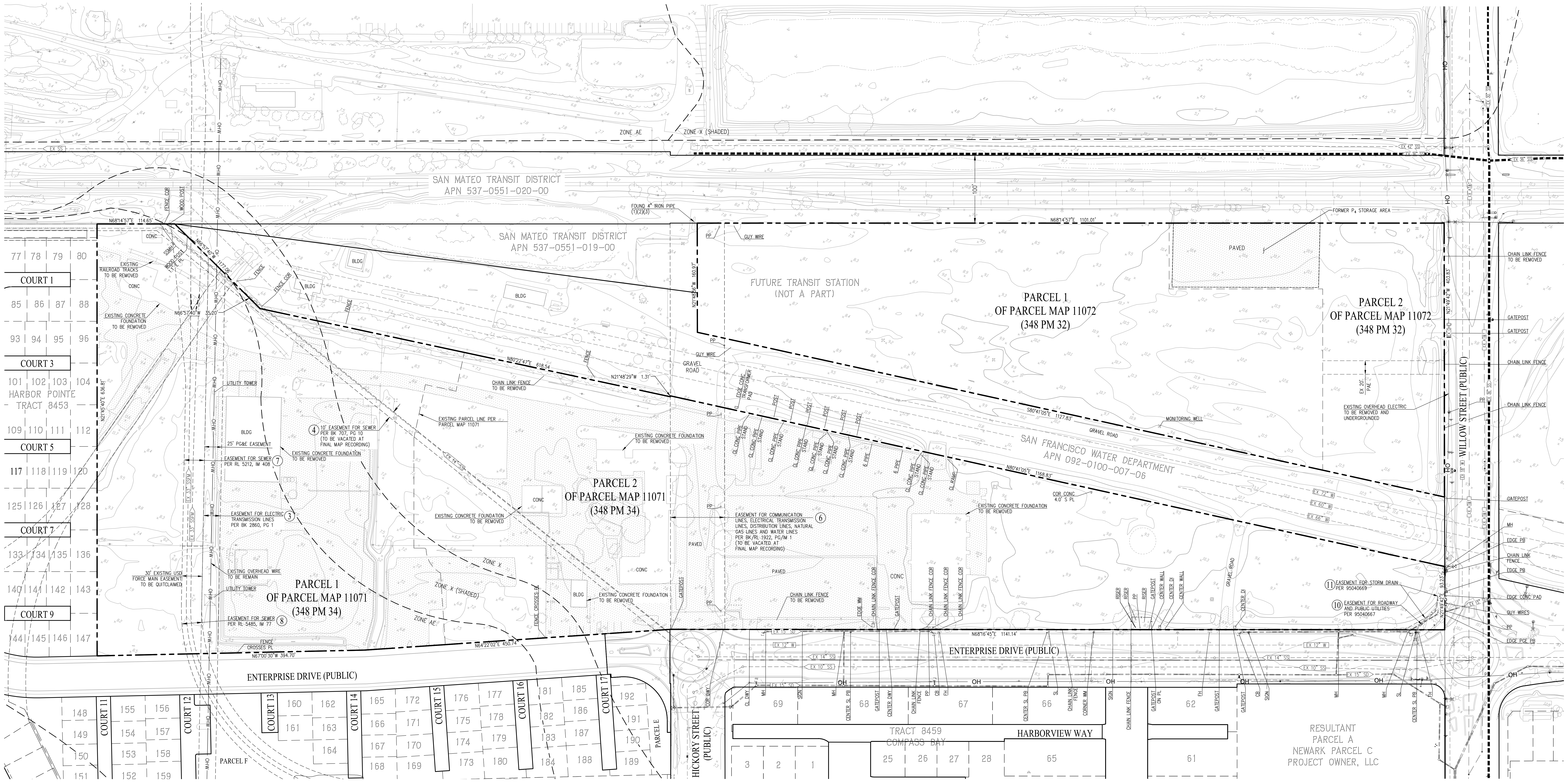
CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA
SCALE: 1" = 50' DATE: MARCH 16, 2020
REVISED: JULY 11, 2022



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SHEET NO.
TM-1
OF 7 SHEETS

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TITLE REPORT

FIRST AMERICAN TITLE COMPANY
ORDER NO. NHSC-6690774 (tc)
DATED SEPTEMBER 7, 2021

EXCEPTIONS AND EXCLUSIONS:

(#) INDICATES TITLE REPORT ITEM NUMBER

① GENERAL AND SPECIAL TAXES AND ASSESSMENTS. THIS ITEM CANNOT BE PLOTTED.

② THE LIEN OF SUPPLEMENTAL TAXES. THIS ITEM CANNOT BE PLOTTED.

③ AN EASEMENT FOR ELECTRIC TRANSMISSION LINES AND INCIDENTAL PURPOSES, IN FAVOR OF PACIFIC GAS AND ELECTRIC COMPANY, RECORDED OCTOBER 27, 1911 IN BOOK 1988 OF DEEDS, PAGE 233.

BY DECREE QUIETING TITLE HAD IN SUPERIOR COURT, ALAMEDA COUNTY ENTITLED ARDEN SALT COMPANY VS. THE BANK OF ALAMEDA COUNTY, ET AL, CASE NO. 114249, CERTIFIED COPY OF WHICH WAS RECORDED JUNE 7, 1932, IN BOOK 2860, PAGE 1, OFFICIAL RECORDS, THE CHARACTER AND LOCATION OF SAID EASEMENTS WHERE ADJUDICATED AND FIXED, AND ADDITIONAL RIGHTS WERE GRANTED TO PACIFIC GAS AND ELECTRIC COMPANY IN CONJUNCTION WITH SAID EASEMENTS. THIS ITEM IS PLOTTED HEREON. SEE SAID DOCUMENT FOR FULL PARTICULARS.

④ AN EASEMENT FOR OUTFALL SEWER PIPELINE AND INCIDENTAL PURPOSES, IN FAVOR OF UNION SANITARY DISTRICT, RECORDED APRIL 07, 1924 AS BOOK 707, PAGE 10 OF OFFICIAL RECORDS. TERMS AND PROVISIONS CONTAINED IN THE ABOVE DOCUMENT. THIS ITEM IS PLOTTED HEREON. SEE SAID DOCUMENT FOR FULL PARTICULARS.

⑤ THE TERMS AND PROVISIONS CONTAINED IN THE RESERVATION TO THE UNITED STATED IN THE DOCUMENT ENTITLED "QUITCLAIM DEED" RECORDED JUNE 9, 1949 IN BOOK 5816, PAGE 365 OF OFFICIAL RECORDS. THIS ITEM CANNOT BE PLOTTED.

⑥ AN EASEMENT FOR COMMUNICATION LINES, ELECTRICAL TRANSMISSION LINES, DISTRIBUTION LINES, NATURAL GAS LINES, WATER LINES AND INCIDENTAL PURPOSES, IN FAVOR OF CITY OF NEWARK, RECORDED FEBRUARY 27, 1967 AS BOOK/REEL 1922, PAGE/IMAGE 1 OF OFFICIAL RECORDS OF OFFICIAL RECORDS. THIS ITEM IS PLOTTED HEREON. SEE SAID DOCUMENT FOR FULL PARTICULARS.

⑦ AN EASEMENT FOR SEWER AND INCIDENTAL PURPOSES, IN FAVOR OF EAST BAY DISCHARGERS, RECORDED JANUARY 09, 1978 AS REEL 5212, IMAGE 408 OF OFFICIAL RECORDS. THIS ITEM IS PLOTTED HEREON. SEE SAID DOCUMENT FOR FULL PARTICULARS.

⑧ AN EASEMENT FOR SEWER AND INCIDENTAL PURPOSES, IN FAVOR OF EAST BAY DISCHARGERS, RECORDED JULY 14, 1978 AS REEL 5485, IMAGE 77 OF OFFICIAL RECORDS. THIS ITEM IS PLOTTED HEREON. SEE SAID DOCUMENT FOR FULL PARTICULARS.

⑨ THE TERMS AND PROVISIONS CONTAINED IN THE DOCUMENT ENTITLED "COMPLETION OF PUBLIC IMPROVEMENTS" RECORDED OCTOBER 15, 1980 AS INSTRUMENT NO. 80-180575 OF OFFICIAL RECORDS. THIS ITEM CANNOT BE PLOTTED.

⑩ AN EASEMENT FOR ROADWAY AND PUBLIC UTILITIES AND INCIDENTAL PURPOSES, IN FAVOR OF CITY OF NEWARK, A MUNICIPAL CORPORATION, RECORDED FEBRUARY 22, 1995 AS SERIES NO. 95040667 OF OFFICIAL RECORDS. THIS ITEM IS PLOTTED HEREON. SEE SAID DOCUMENT FOR FULL PARTICULARS.

⑪ AN EASEMENT FOR STORM DRAIN AND INCIDENTAL PURPOSES, IN FAVOR OF CITY OF NEWARK, A MUNICIPAL CORPORATION, RECORDED FEBRUARY 22, 1995 AS SERIES NO. 95040669 OF OFFICIAL RECORDS. THIS ITEM IS PLOTTED HEREON. SEE SAID DOCUMENT FOR FULL PARTICULARS.

⑫ THE FACT THAT THE LAND LIES WITHIN THE BOUNDARIES OF THE NEWARK 2001 REDEVELOPMENT PROJECT AREA, AS DISCLOSED BY THE DOCUMENT RECORDED JULY 15, 2002 AS INSTRUMENT NO. 2002303101 OF OFFICIAL RECORDS.

A DOCUMENT ENTITLED "REVISED STATEMENT OF INSTITUTION OF REDEVELOPMENT PLAN" RECORDED JULY 25, 2007 AS INSTRUMENT NO. 2007278727 OF OFFICIAL RECORDS. THESE ITEMS CANNOT BE PLOTTED.

⑬ THE TERMS AND PROVISIONS CONTAINED IN THE DOCUMENT ENTITLED "AGREEMENT FOR TEMPORARY WATER SERVICES" RECORDED SEPTEMBER 10, 2003 AS INSTRUMENT NO. 2003537731 OF OFFICIAL RECORDS. THIS ITEM CANNOT BE PLOTTED.

⑭ THE FACT THAT THE LAND LIES WITHIN THE BOUNDARIES OF THE NEWARK REDEVELOPMENT PROJECT NO. 2, AS DISCLOSED BY THE DOCUMENT RECORDED JULY 21, 2010 AS INSTRUMENT NO. 2010200853 OF OFFICIAL RECORDS. THIS ITEM CANNOT BE PLOTTED.

⑮ A DOCUMENT ENTITLED COVENANT AND ENVIRONMENTAL RESTRICTION ON PROPERTY RECORDED NOVEMBER 19, 2019 AS INSTRUMENT NO. 2019237148 OF OFFICIAL RECORDS. THIS ITEM CANNOT BE PLOTTED.

⑯ THE TERMS AND PROVISION OF AN ENVIRONMENTAL RESTRICTION BY AND BETWEEN FMC CORPORATION, A DELAWARE CORPORATION AND LENNAR HOMES OF CALIFORNIA, A CALIFORNIA CORPORATION RECORDED JANUARY 5, 2021, AS INSTRUMENT NO. 2021003845 OF OFFICIAL RECORDS. THIS ITEM CANNOT BE PLOTTED.

⑰ THE TERMS, PROVISIONS AND EASEMENTS OF AN EASEMENT AGREEMENT BY AND BETWEEN LENNAR HOMES OF CALIFORNIA, A CALIFORNIA CORPORATION AND FMC CORPORATION , A DELAWARE CORPORATION RECORDED JANUARY 05, 2021 AS INSTRUMENT NO. 2021003848 OF OFFICIAL RECORDS. THIS ITEM CANNOT BE PLOTTED.

⑱ A PURCHASE MONEY DEED OF TRUST, SECURITY AGREEMENT AND FIXTURE FILING TO SECURE AN ORIGINAL INDEBTEDNESS OF $32,869,377.00 RECORDED JANUARY 05, 2021 AS INSTRUMENT NO. 2021003850 OF OFFICIAL RECORDS. THIS ITEM CANNOT BE PLOTTED.

DATED: DECEMBER 22, 2020
TRUSTOR: LENNAR HOMES OF CALIFORNIA, INC., A CALIFORNIA CORPORATION,
TRUSTEE: FIRST AMERICAN TITLE COMPANY
BENEFICIARY: THE WILLOW PROJECT OWNER, LLC, A DELAWARE LIMITED LIABILITY COMPANY

⑲ THE TERMS, PROVISIONS AND EASEMENT(S) CONTAINED IN THE DOCUMENT ENTITLED EASEMENT AGREEMENT RECORDED JANUARY 5, 2021 AS INSTRUMENT NO. 2021003848 OF OFFICIAL RECORDS.

THE TERMS AND PROVISIONS CONTAINED IN THE DOCUMENT ENTITLED FIRST AMENDMENT TO EASEMENT AGREEMENT RECORDED MARCH 22, 2021 AS INSTRUMENT NO. 2021114228 OF OFFICIAL RECORDS. THESE ITEMS CANNOT BE PLOTTED.

⑳ THE TERMS, PROVISIONS AND EASEMENT(S) CONTAINED IN THE DOCUMENT ENTITLED EASEMENT AGREEMENT RECORDED JANUARY 5, 2021 AS INSTRUMENT NO. 2021003849 OF OFFICIAL RECORDS. THIS ITEM CANNOT BE PLOTTED.

㉑ THIS IS A PRO-FORMA PRELIMINARY REPORT. IT DOES NOT REFLECT THE PRESENT STATUS OF TITLE AND IS NOT INTENDED TO BE A COMMITMENT TO INSURE.

THERE ARE REQUIREMENTS THAT MUST BE MET BEFORE A POLICY OF TITLE INSURANCE CAN BE ISSUED. SUCH REQUIREMENTS MAY INCLUDE THE RECORDATION OF A MAP OR MAPS AND/OR A DEED OR DEEDS. A COMMITMENT TO INSURE SETTING FORTH THOSE REQUIREMENTS SHOULD BE OBTAINED FROM THE COMPANY. THIS ITEM CANNOT BE PLOTTED

㉒ WATER RIGHTS, CLAIMS OR TITLE TO WATER, WHETHER OR NOT SHOWN BY THE PUBLIC RECORDS. THIS ITEM CANNOT BE PLOTTED.

㉓ RIGHTS OF PARTIES IN POSSESSION. THIS ITEM CANNOT BE PLOTTED.

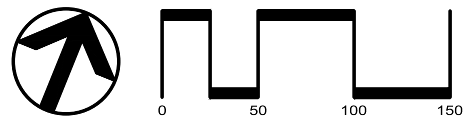
㉔ THROUGH ㉖ CANNOT BE PLOTTED.

LEGEND

▬ ▬ – ▬	SUBDIVISION BOUNDARY
- - - -	EASEMENT LINE
— — —	EXISTING LOT LINE
— — —	FEMA FLOOD ZONE
——	WETLANDS
EX 30"SD	EXISTING STORM DRAIN
EX SS	EXISTING SANITARY SEWER
OHW	EXISTING OVERHEAD WIRES
EX W	EXISTING WATER
■	EXISTING FIELD INLET
●	EXISTING MANHOLE
•–☼	PUBLIC STREETLIGHT
▨	EXISTING AB TO BE REMOVED
①	EXCLUSION OR EXCEPTION NUMBER IN TITLE REPORT

TRACT 8559
VESTING TENTATIVE MAP
FOR CONDOMINIUM PURPOSES
EXISTING SITE CONDITIONS
FMC WILLOW AND GRAND PARK

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA
SCALE: 1" = 50' DATE: MARCH 16, 2020
REVISED: JUNE 22, 2022



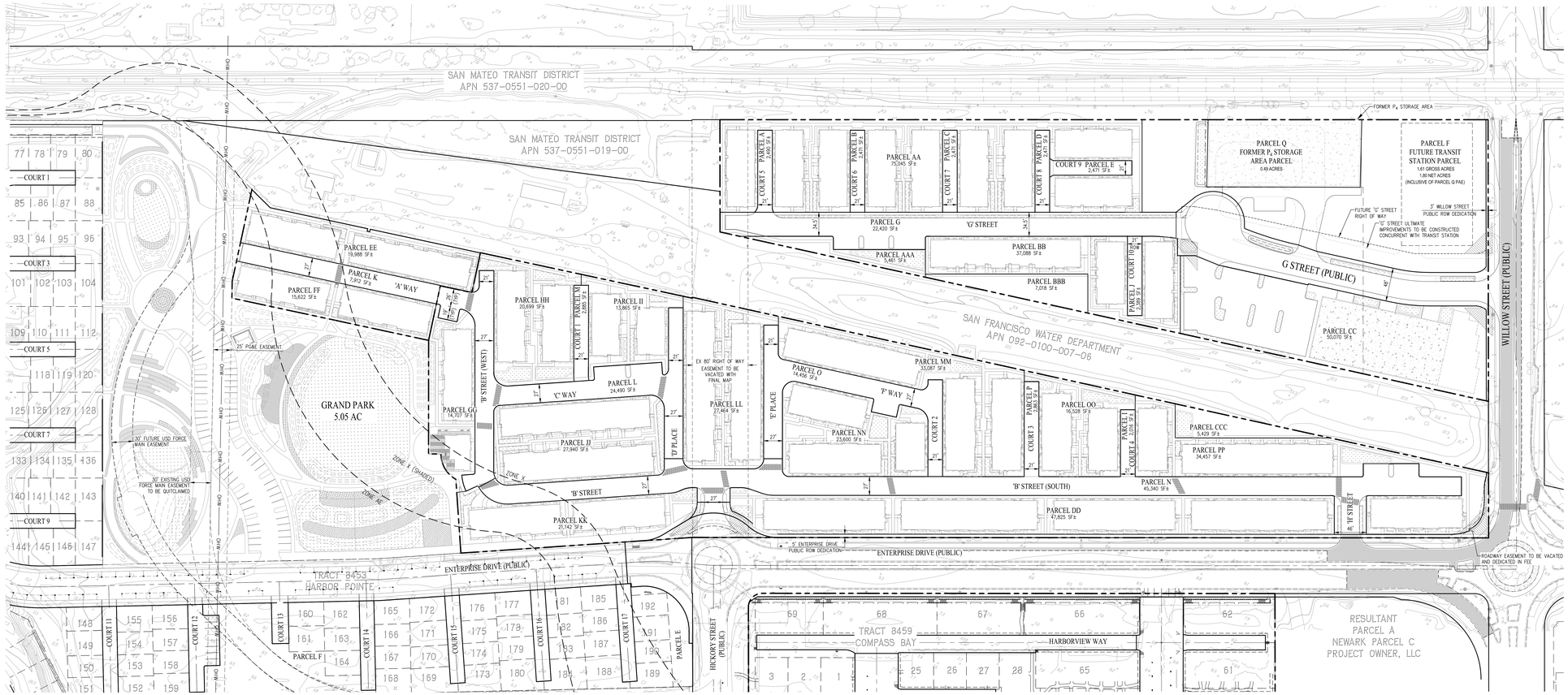
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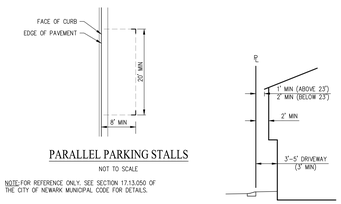
SHEET NO.
TM-2
OF 7 SHEETS

6/22/2022 3:07 PM
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PARCEL SUMMARY

PARCEL	DESCRIPTION	AREA (SF)	OWNER
A	PRIVATE STREET	2,490	HOA
B	PRIVATE STREET	2,471	HOA
C	PRIVATE STREET	2,471	HOA
D	PRIVATE STREET	2,471	HOA
E	PRIVATE STREET	2,471	HOA
F	TRANSIT STATION	70,219	PUBLIC
G	PRIVATE STREET	22,420	HOA
I	PRIVATE STREET	2,016	HOA
J	PRIVATE STREET	2,389	HOA
K	PRIVATE STREET	7,912	HOA
L	PRIVATE STREET	24,490	HOA
M	PRIVATE STREET	2,885	HOA
N	PRIVATE STREET	45,340	HOA
O	PRIVATE STREET	14,456	HOA
P	PRIVATE STREET	2,863	HOA
Q	FORMER P4 STORAGE	21,257	HOA
AA	MULTI-FAMILY LOT	75,045	HOA
BB	MULTI-FAMILY LOT	37,088	HOA
CC	MIXED USE LOT	50,070	HOA
DD	MULTI-FAMILY LOT	47,825	HOA
EE	MULTI-FAMILY LOT	19,988	HOA
FF	MULTI-FAMILY LOT	15,622	HOA
GG	MULTI-FAMILY LOT	14,707	HOA
HH	MULTI-FAMILY LOT	20,699	HOA
II	MULTI-FAMILY LOT	13,865	HOA
JJ	MULTI-FAMILY LOT	27,940	HOA
KK	MULTI-FAMILY LOT	21,142	HOA
LL	MULTI-FAMILY LOT	27,464	HOA
MM	MULTI-FAMILY LOT	33,087	HOA
NN	MULTI-FAMILY LOT	23,600	HOA
OO	MULTI-FAMILY LOT	16,528	HOA
PP	MULTI-FAMILY LOT	34,457	HOA
AAA	OPEN SPACE LOT	5,461	HOA
BBB	OPEN SPACE LOT	7,018	HOA
CCC	OPEN SPACE LOT	5,429	HOA





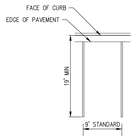
PARALLEL PARKING STALLS

NOT TO SCALE

NOTE: FOR REFERENCE ONLY. SEE SECTION 17.13.050 OF THE CITY OF NEWARK MUNICIPAL CODE FOR DETAILS.

TYPICAL ROOF AND FLOOR OVERHANG SECTION

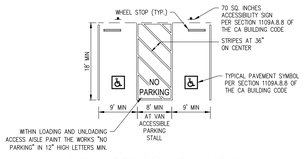
NOT TO SCALE



PERPENDICULAR PARKING STALLS

NOT TO SCALE

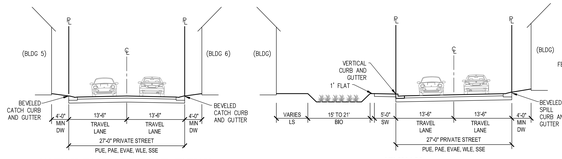
NOTE: FOR REFERENCE ONLY. SEE SECTION 17.23.090 OF THE CITY OF NEWARK MUNICIPAL CODE FOR DETAILS.



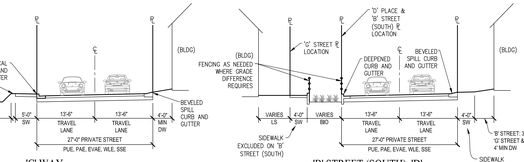
ACCESSIBLE DOUBLE PARKING STALLS

NOT TO SCALE

NOTE: FOR REFERENCE ONLY. SEE FIGURE 11A-2A IN THE CA BUILDING CODE FOR DETAILS.



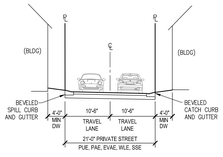
'A' WAY, 'B' STREET (WEST), 'F' WAY



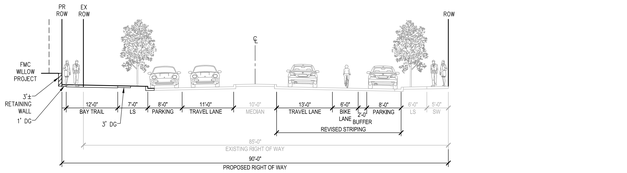
'C' WAY

'B' STREET (SOUTH), 'D' PLACE & 'G' STREET (WEST)

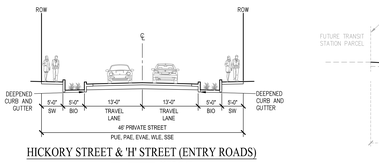
'E' PLACE



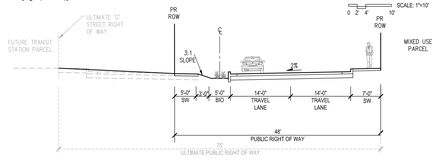
COURT 1-10



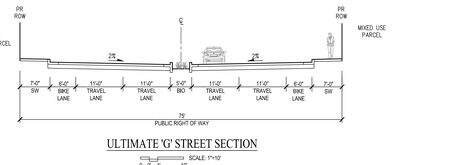
ENTERPRISE DRIVE



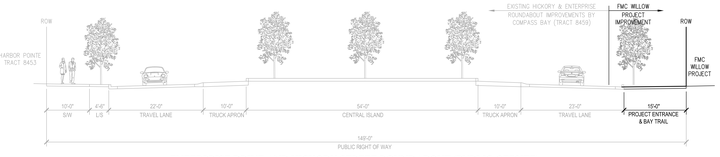
HICKORY STREET & 'H' STREET (ENTRY ROADS)



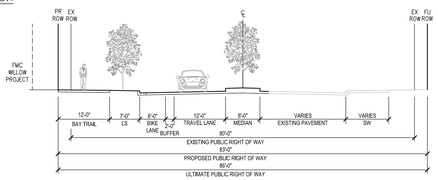
INTERIM 'G' STREET SECTION



ULTIMATE 'G' STREET SECTION



ENTERPRISE DRIVE AND HICKORY STREET ROUNDABOUT (PUBLIC-OFFSITE)



WILLOW STREET

TRACT 8559
VESTING TENTATIVE MAP
FOR CONDOMINIUM PURPOSES
PRELIMINARY LOTTING PLAN AND STREET SECTIONS
FMC WILLOW AND GRAND PARK

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

SCALE: 1"=50' DATE: MARCH 16, 2020

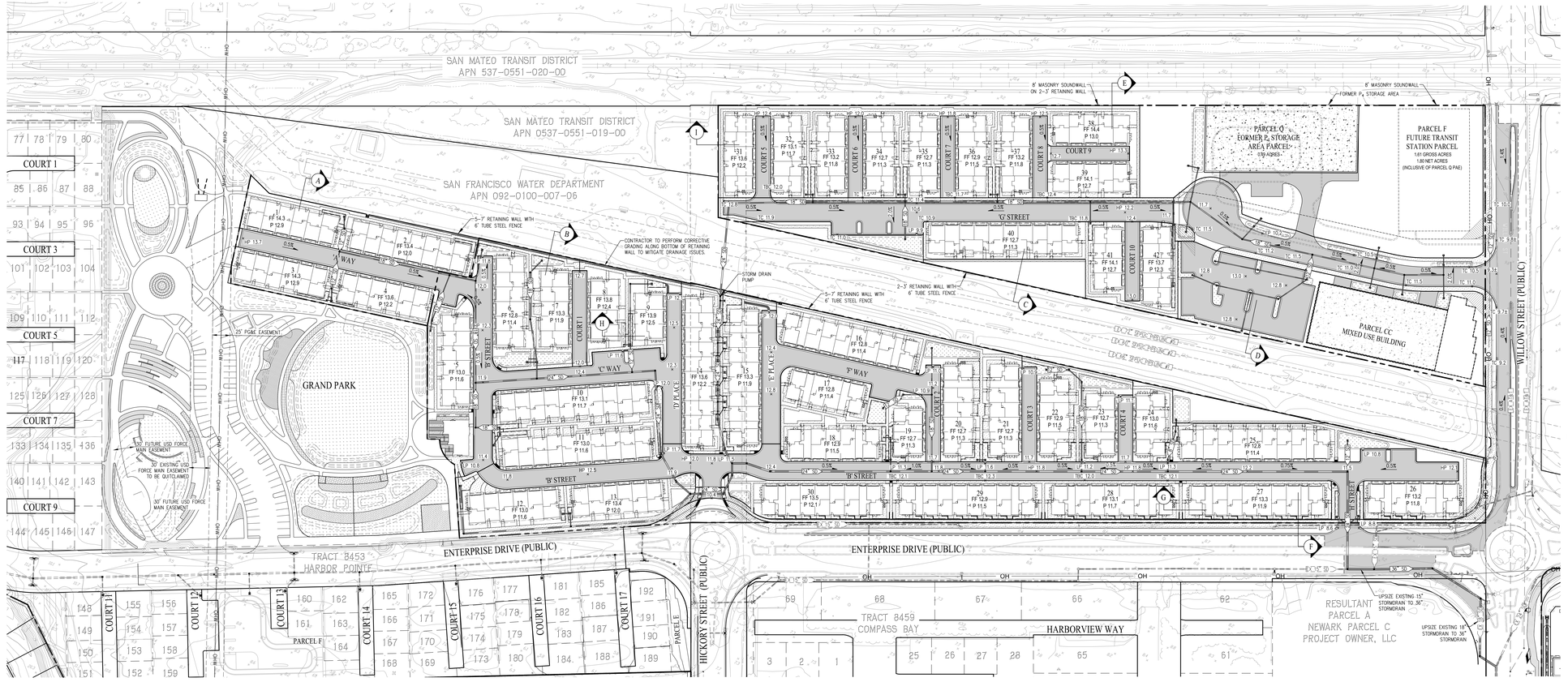
REVISED: JUNE 22, 2022

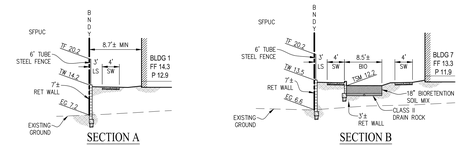
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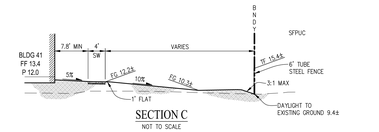
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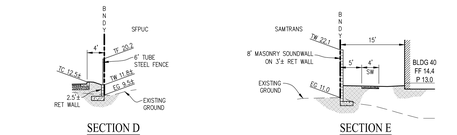
SHEET NO. TM-3 OF 7 SHEETS

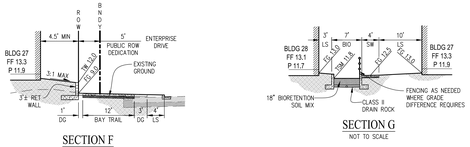
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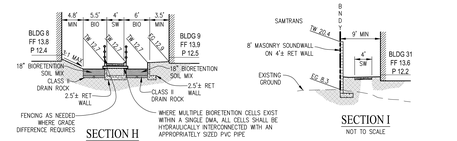




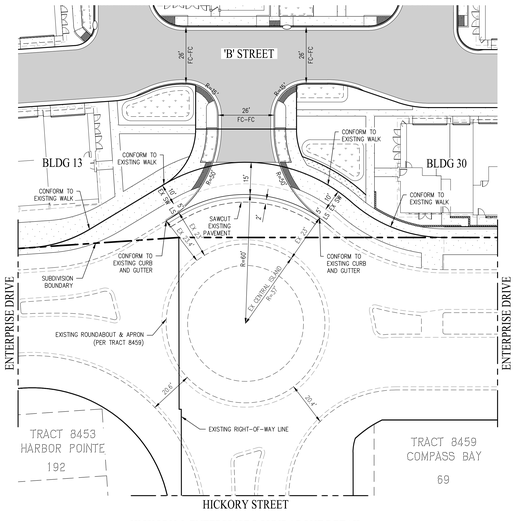






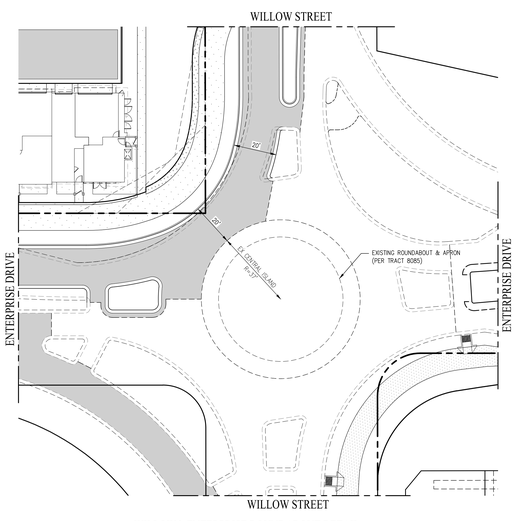


EARTHWORK SUMMARY	
CUT	22,100 CY (+)
FILL	99,800 CY (–)
NET	77,700 CY (–)



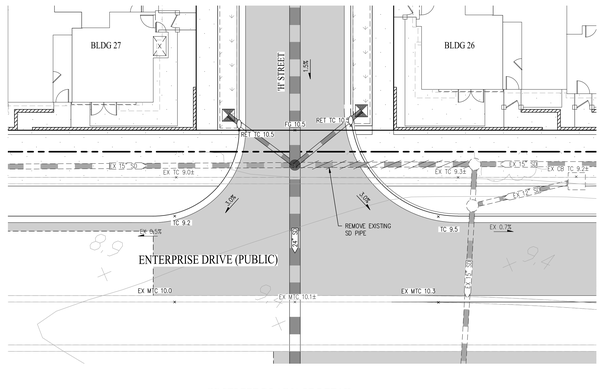
HICKORY & ENTERPRISE ROUNDABOUT DETAIL

SCALE: 1"=20'



WILLOW& ENTERPRISE ROUNDABOUT DETAIL

SCALE: 1"=20'



'H' STREET DRAINAGE DETAIL

SCALE: 1"=10'

TRACT 8559
VESTING TENTATIVE MAP
FOR CONDOMINIUM PURPOSES
PRELIMINARY GRADING AND DRAINAGE PLAN
FMC WILLOW AND GRAND PARK

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

SCALE: 1"=50' DATE: MARCH 16, 2020

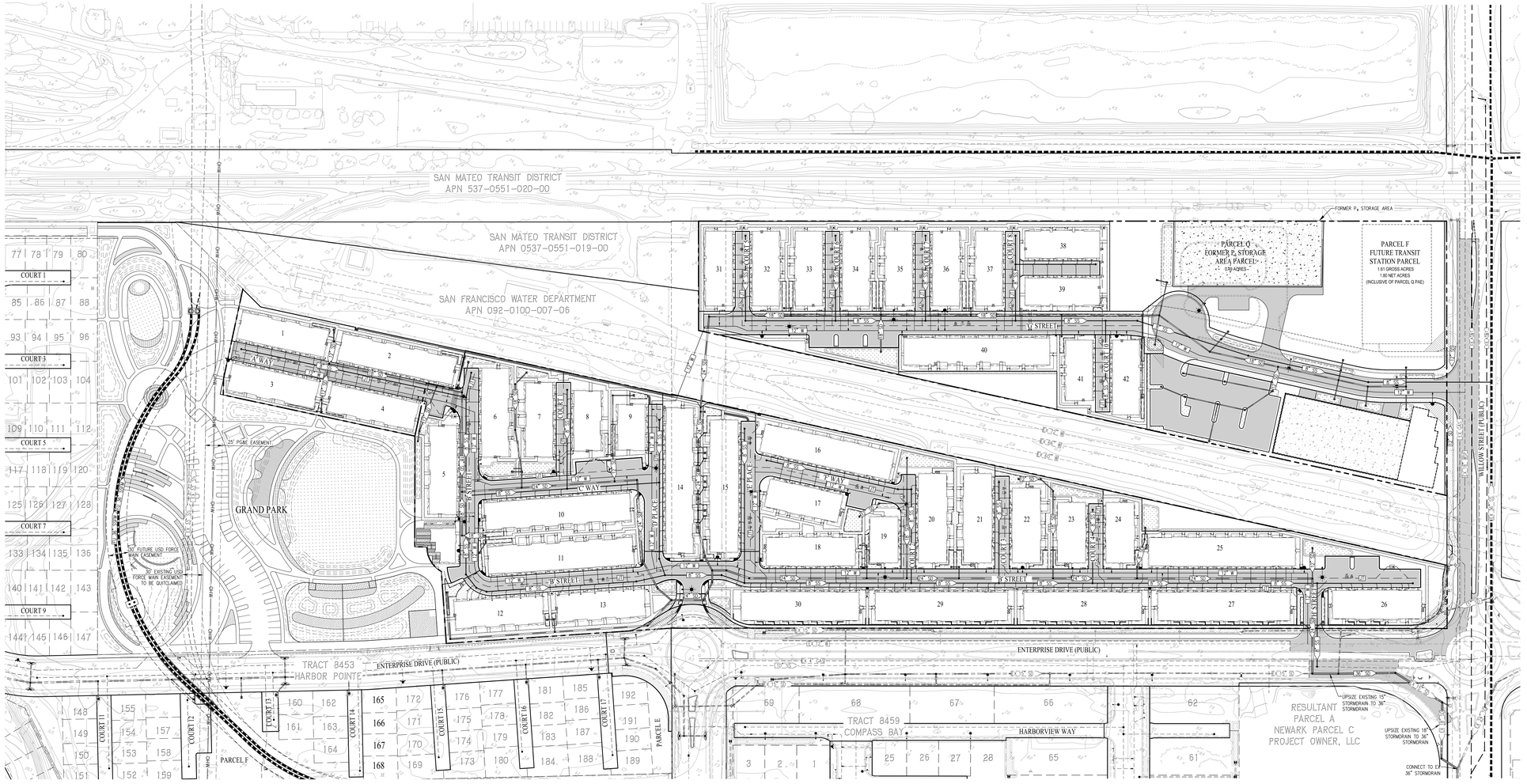
REVISED: JUNE 22, 2022

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SHEET NO. TM-4 OF 7 SHEETS

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LEGEND

- SUBDIVISION BOUNDARY
- EASEMENT LINE
- RIGHT-OF-WAY LINE
- FACE OF CURB
- LIP OF GUTTER
- LOT LINE
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER
- EXISTING WATER
- EXISTING SANITARY SEWER FORCE MAIN
- EXISTING OVERHEAD WIRE
- EXISTING FIRE HYDRANT
- EXISTING FIELD INLET
- EXISTING CATCH BASIN
- EXISTING MANHOLE
- PROPOSED WATER
- PROPOSED SEWER
- PROPOSED MANHOLE
- PROPOSED PRIVATE CATCHBASIN
- PROPOSED PUBLIC CATCHBASIN
- PROPOSED FIELD INLET
- PROPOSED CURB CUT
- PROPOSED STORM DRAIN
- PROPOSED JOINT TRENCH
- PROPOSED JOINT TRENCH BOXES
- PROPOSED STREET LIGHT
- FUTURE STORM DRAIN
- FUTURE SANITARY SEWER
- FUTURE WATER
- FUTURE JOINT TRENCH
- FUTURE SANITARY SEWER FORCE MAIN

TRACT 8559
VESTING TENTATIVE MAP
FOR CONDOMINIUM PURPOSES
PRELIMINARY UTILITY PLAN
FMC WILLOW

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

SCALE: 1"=50' DATE: MARCH 16, 2020

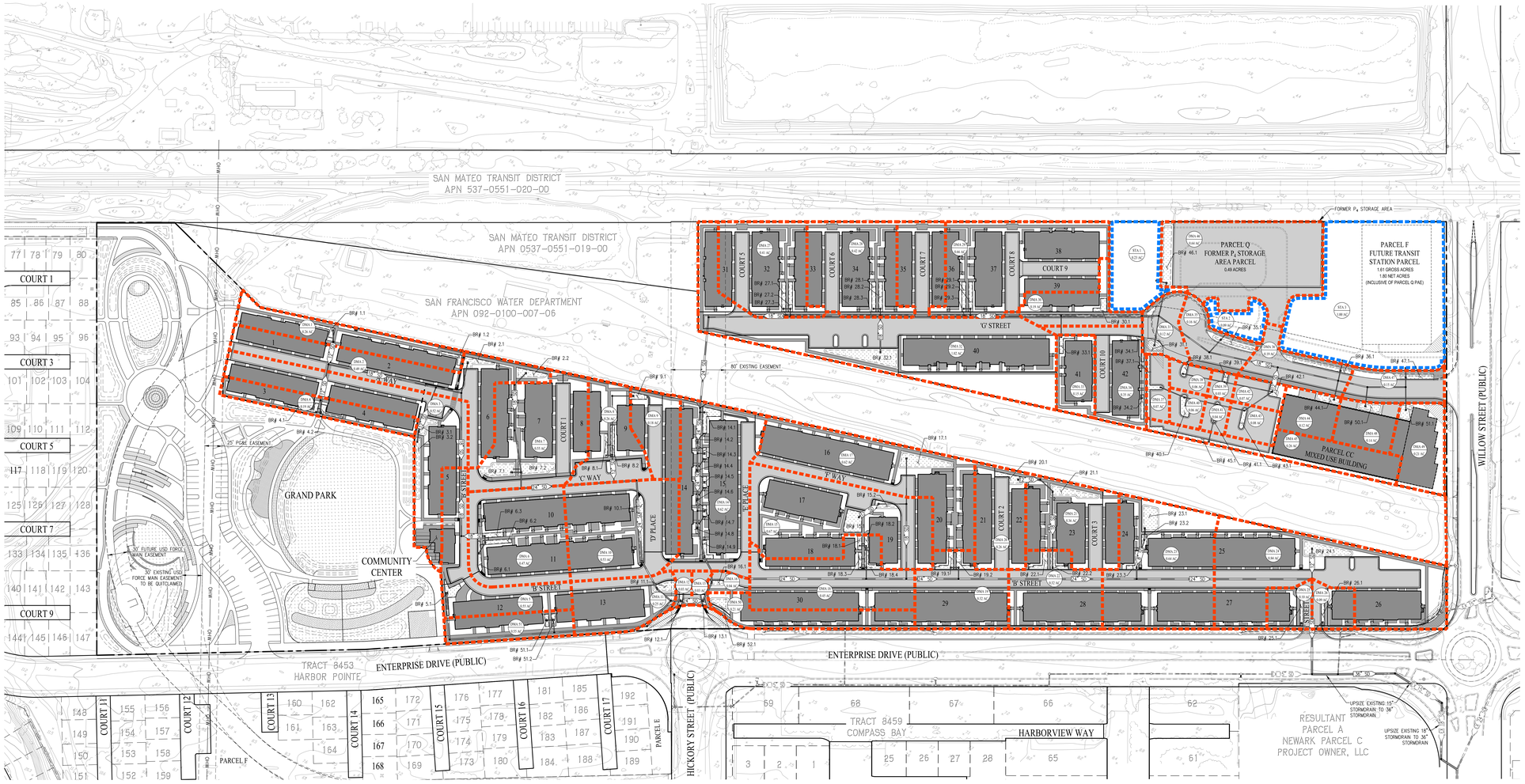
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SHEET NO. TM-5 OF 7 SHEETS

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LEGEND

- SUBDIVISION BOUNDARY
- EASEMENT LINE
- RIGHT-OF-WAY LINE
- FACE OF CURB
- LIP OF GUTTER
- LOT LINE
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER
- EXISTING WATER
- EXISTING SANITARY SEWER FORCE MAIN
- EXISTING OVERHEAD WIRE
- EXISTING FIRE HYDRANT
- EXISTING FIELD INLET
- EXISTING CATCH BASIN
- EXISTING MANHOLE
- PROPOSED WATER
- PROPOSED SEWER
- PROPOSED MANHOLE
- PROPOSED PRIVATE CATCHBASIN
- PROPOSED PUBLIC CATCHBASIN
- PROPOSED FIELD INLET
- PROPOSED CURB CUT
- PROPOSED STORM DRAIN
- FUTURE STORM DRAIN
- FUTURE SANITARY SEWER
- FUTURE WATER
- FUTURE JOINT TRENCH
- FUTURE SANITARY SEWER FORCE MAIN
- BIORETENTION AREA
- OUTFALL RIP RAP AREA
- HOUSE FOOTPRINTS
- ROADWAYS, SIDEWALKS AND DRIVEWAYS
- WATER QUALITY STORM DRAIN PUMPS
- DMA BOUNDARY
- STA BOUNDARY
- DRAINAGE MANAGEMENT AREA
- BIORETENTION IDENTIFIER

DMA 1 (25.55 AC) — DMA = TREATMENT SUBAREA
BRF 13.1 — NUMBERED BIORETENTION WITHIN SUBAREA

SELF TREATMENT AREA SUMMARY TABLE

SELF TREATMENT AREA	TOTAL AREA (SF)
STA 1	10,192
STA 2	3,977
STA 3	43,808
TOTAL	57,977

DRAINAGE MANAGEMENT AREA SUMMARY TABLE

DRAINAGE MGMT AREA	TOTAL AREA (SF)	TOTAL IMPERVIOUS AREA (SF)	TOTAL PERVIOUS AREA (SF)	EFFECTIVE IMPERVIOUS AREA (SF)	TREATMENT AREA BASED ON FLOW & VOLUME (SF)	4% TREATMENT AREA (SF)	3% TREATMENT AREA (SF)	TREATMENT AREA PROVIDED (SF)
DMA 1	11,338	7,752	3,586	8,111	230	324	243	308
DMA 2	21,440	18,248	3,192	18,567	526	743	557	623
DMA 3	22,651	17,891	4,760	18,367	521	735	551	555
DMA 4	8,205	6,655	1,550	6,810	193	272	204	281
DMA 5	15,097	12,861	2,236	13,085	571	523	393	701
DMA 6	20,376	17,970	2,406	18,211	516	728	546	556
DMA 7	23,944	18,409	5,535	18,963	537	759	569	1,290
DMA 8	13,298	10,085	3,213	10,406	295	416	312	331
DMA 9	6,072	4,616	1,456	4,702	135	190	143	145
DMA 10	22,934	20,162	2,772	20,439	579	818	613	785
DMA 11	11,043	8,682	2,361	8,918	253	357	268	274
DMA 12	1,226	1,098	128	1,111	31	44	33	60
DMA 13	1,247	1,118	129	1,131	32	45	34	61
DMA 14	27,089	21,833	5,256	22,359	634	894	671	1,111
DMA 15	29,143	23,884	5,259	24,410	692	976	732	874
DMA 16	1,677	1,019	658	1,085	31	43	33	133
DMA 17	27,139	21,693	5,446	22,238	630	890	667	957
DMA 18	19,816	17,857	1,959	18,053	512	722	542	536
DMA 19	13,807	12,362	1,445	12,507	354	500	375	546
DMA 20	11,260	9,517	1,743	9,691	275	388	291	323
DMA 21	15,503	12,108	3,395	12,448	353	498	373	506
DMA 22	13,976	12,029	1,947	12,224	346	489	367	539
DMA 23	28,054	21,284	6,770	21,961	622	878	659	998
DMA 24	36,429	27,140	9,289	28,069	795	1,123	842	893
DMA 25	4,203	3,618	585	3,677	104	147	110	160
DMA 26	3,978	3,468	510	3,519	100	141	106	155
DMA 27	17,702	14,037	3,665	14,404	408	576	432	719
DMA 28	18,430	14,668	3,762	15,044	426	602	451	721
DMA 29	28,626	22,897	5,729	23,470	665	939	704	721
DMA 30	8,023	5,854	2,169	6,071	172	243	182	205
DMA 31	5,294	4,624	670	4,691	133	188	141	213
DMA 32	55,580	39,960	15,620	41,522	1,177	1,661	1,246	1,386
DMA 33	6,574	4,954	1,620	5,116	145	205	153	206
DMA 34	11,898	10,192	1,706	10,363	294	415	311	319
DMA 35	6,911	6,088	823	6,170	175	247	185	200
DMA 36	8,291	7,445	846	7,530	213	301	226	384
DMA 37	3,279	2,752	527	2,805	79	112	84	312
DMA 38	2,402	2,253	149	2,268	64	91	68	149
DMA 39	1,466	1,356	110	1,367	39	55	41	110
DMA 40	2,583	2,275	308	2,306	65	92	69	308
DMA 41	1,905	1,727	178	1,745	49	70	52	178
DMA 42	2,935	2,380	555	2,436	69	97	73	122
DMA 43	3,769	3,604	165	3,621	103	145	109	178
DMA 44	5,409	4,713	696	4,783	136	191	143	230
DMA 45	11,272	9,020	2,252	9,245	262	370	277	744
DMA 46	27,980	26,128	1,852	26,313	746	1,053	789	957
DMA 47	6,888	5,947	941	6,041	171	242	181	203
DMA 48	6,017	5,461	556	5,517	156	221	165	241
DMA 49	9,064	6,082	2,982	6,380	181	255	191	287
DMA 50	9,116	6,968	2,148	7,183	204	287	215	230
DMA 51	7,211	5,381	1,830	5,564	158	223	167	174
TOTAL	672,359	544,744	127,615	557,506	15,999	22,300	16,725	23,024

PRE PROJECT AND POST PROJECT COMPARISON

	IMPERVIOUS (%)	PERVIOUS (%)	TOTAL (%)
PRE-PROJECT	36.2	63.8	100
POST-PROJECT	74.6	25.4	100

NOTES:
WHERE MULTIPLE BIORETENTION CELLS EXIST WITHIN A SINGLE DMA, ALL CELLS SHALL BE HYDRAULICALLY INTERCONNECTED WITH AN APPROPRIATELY SIZED PVC PIPE.

TRACT 8559
VESTING TENTATIVE MAP
FOR CONDOMINIUM PURPOSES
PRELIMINARY STORM WATER CONTROL PLAN
FMC WILLOW AND GRAND PARK

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

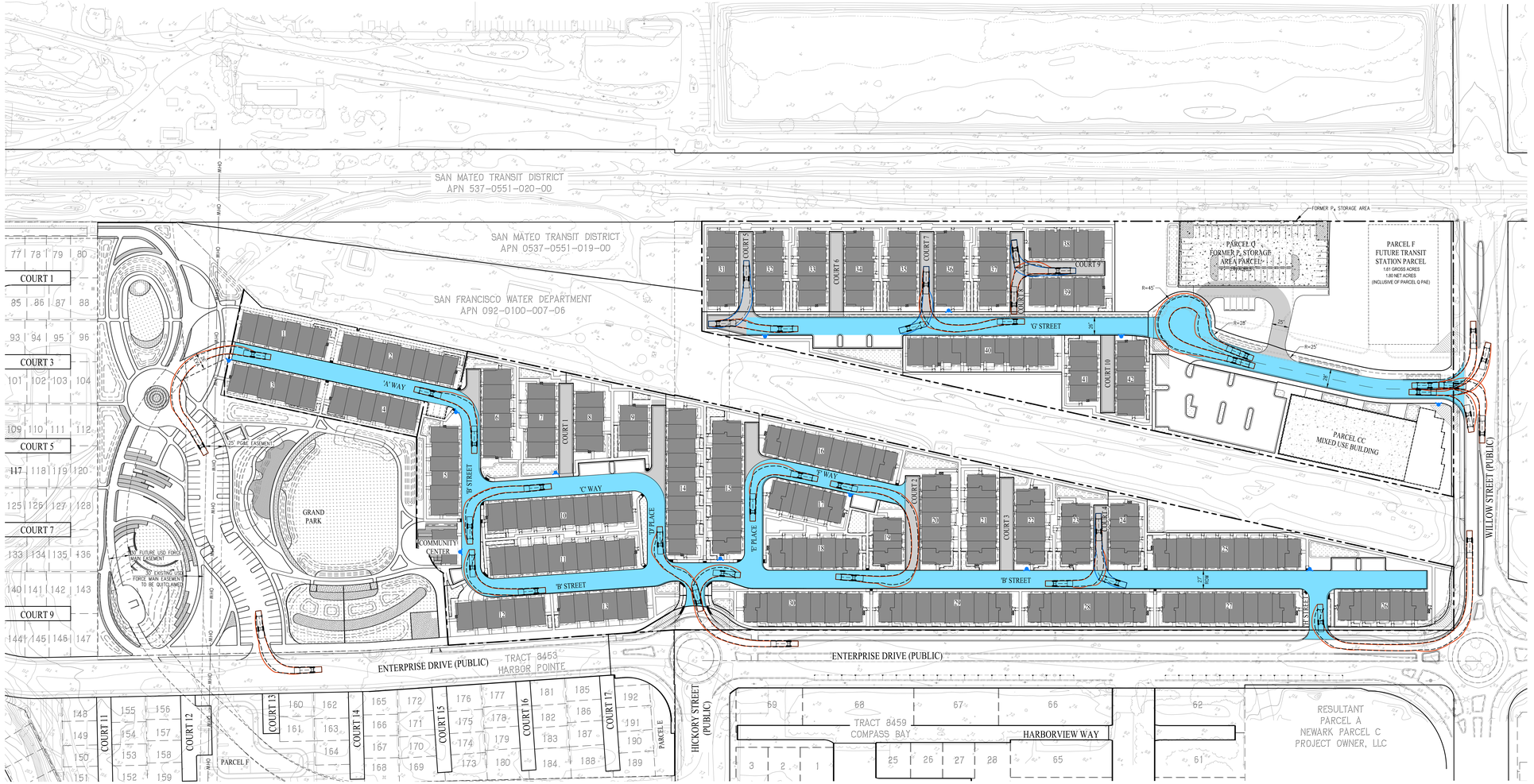
SCALE: 1"=50 DATE: MARCH 16, 2020
REVISED: JUNE 22, 2022

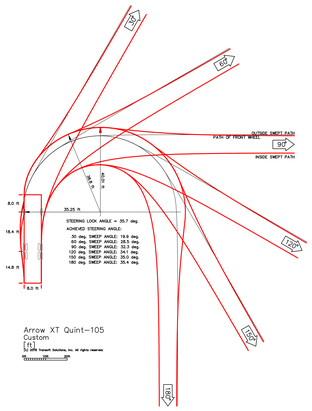
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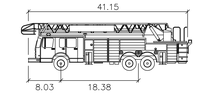
cbg CIVIL ENGINEERS • SURVEYORS • PLANNERS
SAN RAMON • (925) 866-0322
SACRAMENTO • (916) 375-1877
WWW.CBANDG.COM

SHEET NO. TM-6 OF 7 SHEETS

F:\2019\002874\010\ACAD\TMTM-06.DWG







Arrow XT Quint-105

	feet
Width	: 8.00
Track	: 9.06
Lock to Lock Time	: 4.0
Steering Angle	: 35.7

LEGEND:

- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- 26' MIN EMERGENCY AERIAL APPARATUS TRAVEL WAY
- 20' MIN FIRE ACCESS LANE
- RED CURB

TRACT 8559
VESTING TENTATIVE MAP
FOR CONDOMINIUM PURPOSES
FIRE ACCESS PLAN

FMC WILLOW

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

SCALE: 1"=50' DATE: MARCH 16, 2020

REVISED: JUNE 22, 2022

0 50 100 150

cbg CIVIL ENGINEERS • SURVEYORS • PLANNERS

SAN RAMON • (925) 866-0322
SACRAMENTO • (916) 375-1877
WWW.CBANDG.COM

SHEET NO.
TM-7
OF 7 SHEETS

P:\2674\0002674\01\ACAD\TM\TM-07.DWG



LAND AREA SUMMARY TABLE

PARCEL	NAME	GROSS ACRES
A	BAYSHORES (TORIAN)	42.2
B	LIGHTHOUSE (SHH)	4.6
C	SENIOR HOUSING	2.1
D	HOTEL SITE	1.4
E	BRIDGEWAY	54.5
F	PARCEL C	17.4
G1-G6	FMC WILLOW	22.1
H	GLASS BAY (JONES HAMILTON)	21.3
I	HONEY WELL	2.2
J	HONEY WELL	5.7
K	GALLADE PARK	2.3
L	COMPASS BAY (ASHLAND)	10.3
	TOTAL	186.1

LEGEND

- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- MEDIUM/HIGH DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- COMMERCIAL/RETAIL
- COMMERCIAL/MIXED USE
- COMMERCIAL/OFFICE
- TRANSIT STATION
- PARKS & RECREATION OPEN SPACE
- SFPUC/RESTRICTED USE AREA

TRACT 8559
LAND USES AFTER COUNCIL APPROVED CHANGES AND FMC WILLOW APPLICATION

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

SCALE 1"=200' DATE: MAY 23, 2022

0 200 400 600

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SAN RAMON ▪ (925) 866-0322
SACRAMENTO ▪ (916) 375-1877
WWW.CBANDG.COM

F:\2674-000\2674-010\ACAD\EXHIBITS\XB-028.2_SPECIFIC PLAN LAND USE CHANGE DURING ENTITLEMENT_WITH WILLOW.DWG

5/23/2022 8:37 AM

FIRST AMENDMENT TO PARK AGREEMENT

THIS FIRST AMENDMENT TO PARK AGREEMENT (this "***Amendment***") is dated as of _____, 2022 ("***Effective Date***"), by and among FMC CORPORATION, a Delaware corporation ("***FMC***"), LENNAR HOMES OF CALIFORNIA, LLC, a California limited liability company, ("***Builder***"), and CITY OF NEWARK ("***City***") (collectively, the "***Parties***" and individually, a "***Party***").

R E C I T A L S

A. FMC, the City and The Parcel C Project Owner, LLC, a Delaware limited liability company ("***PCPO***") entered into that certain Park Agreement dated as of January 24, 2019 (the "***Park Agreement***").

B. The Park Agreement was assigned by PCPO to Builder pursuant to that certain Assignment and Assumption of Park Agreement dated December 28, 2020, in accordance with Section 14 of the Park Agreement.

C. Through no fault of the Parties there have been numerous delays to implementing the terms of the Park Agreement caused by delays in the relocation of Union Sanitary District force mains located in the Park Parcel.

D. The Parties desire to amend and modify the Park Agreement in accordance with the terms and provisions set forth herein. Unless otherwise defined herein, all capitalized terms used in this Amendment shall have the meanings ascribed to such terms in the Park Agreement.

A G R E E M E N T

NOW, THEREFORE, in consideration of the covenants herein contained and the respective undertakings of the parties hereinafter set forth, it is hereby agreed:

1. New Park Parcel. The Parties have agreed the configuration of the Park Parcel shown on the Site Plan on **Exhibit "B"** of the Park Agreement shall be replaced by the configuration of the Park Parcel shown on the Site Plan on **Exhibit "1"** attached to this Amendment. Furthermore, the Conceptual Park Plan on **Exhibit "C"** of the Park Agreement shall be replaced by **Exhibit "2"** attached to this Amendment.

2. Park Delivery Date. The "Park Delivery Date" of **December 31, 2023** in the first sentence of Section 4.9 is hereby amended to **December 31, 2025**. Except for the foregoing amendment, the remainder of Section 4.9 shall remain in full force and effect.

3. Park Delivery. Section 4.12 of the Park Agreement is hereby deleted and replaced with the following:

> "Notwithstanding the foregoing in this Section 4, it is understood that Park Delivery must occur and all Park Improvements must be completed such that the IOD may be accepted by the City no later than

July 3, 2028. In the event the **July 3, 2028** deadline is not met but the conditions set forth in Sections 3.1 through 3.5 are otherwise satisfied, then City shall release the Park Delivery Bonds and City shall be entitled to enforce the Builder's obligations under the Park Improvement Bond."

4. Unavoidable Delay. The first sentence of Section 8 of the Park Agreement is hereby deleted and replaced with the following:

"The timing for performance of the obligations of FMC and Builder under this Agreement shall be subject to extension for force majeure events, provided, however, that in no event shall the **July 3, 2028** deadline set forth in Section 4.12 above be extended under any circumstance."

5. Counterparts. This Amendment and any modifications, amendments or supplements thereto may be executed in several counterparts, and all so executed shall constitute one Amendment binding on all parties hereto, notwithstanding that all parties are not signatories to the original or the same counterpart. The parties may also deliver executed copies of this Amendment to each other by electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. No party may raise the use of any image transmission device or method or the fact that any signature was transmitted as an image as a defense to the enforcement of this Amendment. At the request of either party, the parties will confirm signatures by signing and delivering an original document.

6. Conflict. In case of any inconsistency between this Amendment and the Park Agreement, the provisions containing such inconsistency shall first be reconciled with one another to the maximum extent possible, and then to the extent of any remaining inconsistency, the terms of this Amendment shall control.

7. Entire Agreement. The Park Agreement, together with this Amendment, embodies the entire understanding between the Parties with respect to its subject matter and can be changed only by an instrument in writing signed by the Parties.

8. Force and Effect. Except as modified by this Amendment, the Park Agreement is ratified, affirmed, in full force and effect, and incorporated herein by this reference.

[Signatures on Following Pages]

IN WITNESS WHEREOF, this Amendment has been executed on the date first set forth above.

CITY:

CITY OF NEWARK, a California municipal corporation

By:_____
Name:_____
Title:_____

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

[signatures continue on the next page]

BUILDER:

LENNAR HOMES OF CALIFORNIA, LLC, a California limited liability company,

By:_____
Name:_____
Title:_____

[signatures continue on the next page]

IN WITNESS WHEREOF, this Amendment has been executed on the date first set forth above.

FMC:

FMC CORPORATION, a Delaware corporation

By:_____
Name:_____
Title:_____

EXHIBIT "1"

GENERAL DEPICTION OF NEW PARK PARCEL

[see attached]

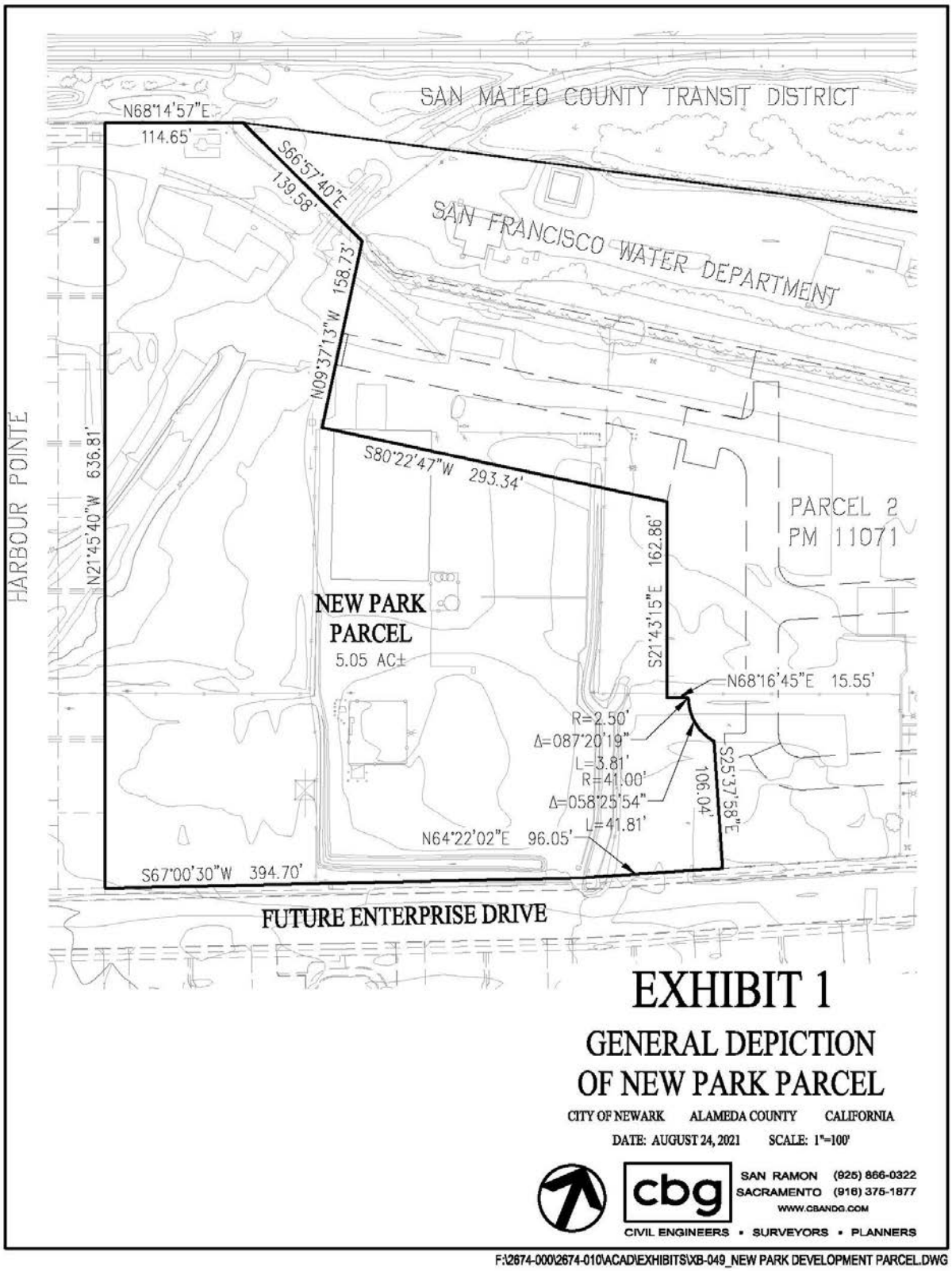

SAN MATEO COUNTY TRANSIT DISTRICT
SAN FRANCISCO WATER DEPARTMENT
HARBOUR POINTE
N68°14'57"E
114.65'
S66°57'40"E
139.58'
N09°37'13"W 158.73'
S80°22'47"W 293.34'
N21°45'40"W 636.81'
PARCEL 2
PM 11071
NEW PARK
PARCEL
5.05 AC±
S21°43'15"E 162.86'
N68°16'45"E 15.55'
R=2.50'
Δ=087°20'19"
L=3.81'
R=41.00'
Δ=058°25'54"
L=41.81'
S25°37'58"E
106.04'
N64°22'02"E 96.05'
S67°00'30"W 394.70'
FUTURE ENTERPRISE DRIVE
EXHIBIT 1
GENERAL DEPICTION
OF NEW PARK PARCEL
CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA
DATE: AUGUST 24, 2021 SCALE: 1"=100'
cbg
SAN RAMON (925) 866-0322
SACRAMENTO (916) 375-1877
WWW.CBANDG.COM
CIVIL ENGINEERS • SURVEYORS • PLANNERS
F:\2674-000\2674-010\ACAD\EXHIBITS\XB-049_NEW PARK DEVELOPMENT PARCEL.DWG

EXHIBIT "2"

NEW CONCEPTUAL PARK PLAN

[see attached]



BAYSIDE COMMUNITY PARK

NEWARK | CALIFORNIA

INTEGRAL COMMUNITIES | 18-047

DATE 8 | 20 | 21

1"=50'-0" SCALE

0 50 100

NORTH

CONCEPTUAL PARK PLAN

URBAN ARENA

Exhibit "2"

AFFORDABLE HOUSING OBLIGATION SATISFACTION AGREEMENT FOR THE WILLOW AND HARBOR POINTE PROJECTS

THIS AFFORDABLE HOUSING OBLIGATION SATISFACTION AGREEMENT FOR THE WILLOW AND HARBOR POINTE PROJECTS ("**Agreement**") is made as of _____, 2022, (the "**Effective Date**") by and among the **CITY OF NEWARK**, a California municipal corporation (the "**City**"), on the one hand, and **THE WILLOW PROJECT OWNER, LLC**, a Delaware limited liability company ("**Willow Owner**"), and **LENNAR HOMES OF CALIFORNIA, LLC**, a California limited liability company ("**Lennar**)(collectively, Willow Owner and Lennar are sometimes referred to as "**Developers**"), on the other hand**.**

RECITALS

A. Newark Municipal Code ("**NMC**") Chapter 17.18 requires that developers of residential housing units pay a housing impact fee to contribute to the supply of housing for households with very low, low, and moderate incomes (the "**Housing Impact Fee**"). The amount of the Housing Impact Fee was established by the Newark City Council pursuant to Resolution No. 10,184.

B. NMC Section 17.18.050 allows a developer to provide affordable units as an alternative to paying the Housing Impact Fee, provided that the proposed alternative means of compliance is approved by the City Council in accordance with the procedures set forth in Section 17.18.050.

C. The City Council of the City of Newark previously adopted Resolution No. 10,184 establishing the City's current affordable housing program to mitigate the impacts of residential development on the need for affordable housing (the "**Affordable Housing Program**").

D. The Parcel C Project Owner, LLC previously obtained entitlements for approximately seventeen and 4/10 acres (17.4) acres of real property in the City of Newark, County of Alameda, State of California, more particularly described in the legal description attached hereto as **Exhibit A** and incorporated herein by this reference which is currently owned by Lennar Homes of California, Inc., a California corporation ("**Lennar**") (the "**Harbor Pointe Property**"). Lennar plans to develop the Harbor Pointe Property with approximately 192 market rate dwelling units, which is sometimes referred to as the "**Harbor Pointe Project**").

E. Condition of Approval "dd" to the Harbor Pointe Project provides:

> "Applicant shall comply with the City's affordable housing ordinance by either (i) paying the affordable housing in lieu fee at a rate of $20.60 per square foot on the first 1,000 square feet of living space and $8.25 per square foot over 1,000 square feet per dwelling unit, or (ii) entering into an affordable housing agreement requiring

applicant to provide offsite senior and/or affordable units in a form reviewed and approved by the City Council."

This Agreement is intended to satisfy Harbor Pointe Condition of Approval "dd" with respect to the Harbor Pointe Project and Willow Condition of Approval _____ with respect to the Willow Project.

F. Willow Owner and Lennar are currently applying for entitlements for approximately seventeen and 1/10 (17.1) acres of real property in the City of Newark, County of Alameda, State of California, more particularly described in the legal description attached hereto as **Exhibit B** and incorporated herein by this reference (the "**Willow Property**"). Lennar plans to develop the Willow Property with approximately 279 market rate dwelling units, which is sometimes referred to as the "**Willow Project.**" Lennar owns the majority of the Willow Property and Willow Owner owns a portion of the Willow Property known as the "mixed use parcel," which was retained by Willow Owner to develop the affordable housing project described below.

G. The Affordable Housing Program provides an overall goal of providing affordable housing throughout the City, but includes flexibility in implementing this overall goal for each project by determining an alternative means of compliance. This Agreement implements those requirements by determining the appropriate amount of housing to be provided by the Harbor Pointe Project and the Willow Project which would exceed what could be achieved through the payment of impact fees, and shall constitute the affordable housing program for the Harbor Pointe Project and the Willow Project.

H. Under the guidelines of Resolution 10,184, the required number of affordable dwelling units for Harbor Pointe Property and the Willow Property would be 85.42 units consisting of 44.2 Very Low-Income Units, 21.86 Low-Income Units, and 19.34 Moderate-Income Units. Developers' plan exceeds the required number of affordable units.

NOW, THEREFORE, in consideration of the foregoing recitals which are hereby incorporated into the operative provisions of this Agreement by this reference and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, the City and the Developers agree as follows:

1. **Definitions**.

1.1 "**Affordable Dwelling Unit**" shall mean each of the dwelling units required to satisfy the Affordable Housing Obligation.

1.2 "**Affordable Housing Declaration**" shall mean an Affordable Housing Declaration of Covenants and Restrictions to ensure the continued availability of Affordable Dwelling Units consistent with the affordability levels set forth in the Affordable Housing Obligation and shall be substantially in the form attached hereto as **Exhibit C**.

1.3 "**Affordable Housing Site**" shall mean the portion of the Willow Property legally described in **Exhibit D-1** attached hereto and incorporated herein by this reference and as depicted on **Exhibit D-2**.

1.4 **"Affordable Housing Obligation"** shall mean the obligation to construct the following Affordable Dwelling Units to satisfy the affordable housing need created by the Harbor Pointe Project and the Willow Project set forth below:

	Units
Very Low-Income Household (30-50% AMI)	47
Low Income Household (50-80% AMI)	23
Moderate Income Household (80-120% AMI)	20
Manager Unit (Unrestricted)	1
Total	**91**

Affordable Housing Developer will provide a mix of 1, 2 and 3 bedroom Affordable Dwelling Units and the final unit mix is subject to the reasonable approval of the Community Development Director.

1.5 "**Area Median Income"** or **"AMI"** shall mean the area median income for the County of Alameda ("County") as published annually by the Department of Housing and Community Development, and determined in accordance with the U.S. Department of Housing and Urban Development criteria then in effect and published from time to time. For purposes of this Agreement, the qualifying limits shall be those limits for the County, as set forth in Title 25, California Code of Regulations, section 6932, as that section may be amended, modified or recodified from time to time. If the California Code of Regulations is amended or modified during the term of this Agreement so that such regulations do not specify the area median income for the County, the City and Willow Owner shall negotiate in good faith to determine an equivalent authoritative source which determines median income for the County.

2. **Term of Agreement**. This Agreement shall become operative and commence upon the Effective Date and remain in effect until a Termination Event has occurred. Upon the expiration or termination of the term, this Agreement shall be deemed terminated, and have no further force and effect. "**Termination Event"** shall be defined as the completion, as evidenced by recordation of the Affordable Housing Declaration and the issuance of a certificate of completion or equivalent, of Affordable Dwelling Units in a number equal to or greater than the Affordable Housing Obligation.

3. **Satisfaction of Affordable Housing Obligation Under City's Affordable Housing Program**. In-lieu of paying affordable housing impact fees as set forth in Resolution No. 10,184, Willow Owner shall satisfy one hundred percent (100%) of the Affordable Housing Obligation for the Harbor Pointe Project and the Willow Project by causing, at no cost to City, the construction of a project containing approximately ninety (90) Affordable Dwelling Units) and a manager's unit on the Affordable Housing Site, which is situated upon the Willow Property, and making those Affordable Dwelling Units available for occupancy by persons or households meeting the criteria of the Affordable Housing Declaration. The Affordable Housing Site may be reasonably relocated by the Developers on the Willow Property, and sized as necessary to accommodate the actual number of Affordable Dwelling Units required hereunder, with the approval of the City, which approval shall not be unreasonably withheld. The final boundaries of

the Affordable Housing Site will be determined by an approved lot line adjustment or final map, as the case may be, for the Willow Project, and upon recordation of the lot line adjustment or final map the Affordable Housing Site shall be deemed to be revised to conform to the adjusted lot or final map.

4. **Recordation of Affordable Housing Declaration.** Willow Owner shall cause the affordable housing developer to execute and record the Affordable Housing Declaration prior to issuance of a certificate of occupancy for the Affordable Dwelling Units. The Affordable Housing Declaration shall be substantially in the form attached hereto as **Exhibit C**.

5. **Construction Deadline**. Willow Owner shall cause the completion of construction as evidenced by receipt of certificates of occupancy or equivalent for all of the Affordable Dwelling Units by December 31, 2027, or such other later date as the parties may agree in writing.

6. **Restriction of Affordable Housing Site**.

6.1 **Recordation of Restrictive Covenant**. Within five (5) business days of approval of this Agreement by the City Council and the mutual execution of this Agreement, the Developers shall cause to be recorded against the Affordable Housing Site a restrictive covenant reciting the obligation to provide no less than ninety (90) Affordable Dwelling Units in substantially the form attached hereto as **Exhibit E** and restricting the use and development of the Affordable Housing Site to such use. Upon recordation of a lot line adjustment or a final map modifying the boundaries of the Affordable Housing Site, the parties shall record an amendment to the restrictive covenant referencing the modified Affordable Housing Site parcel, if necessary.

6.2 **Agreements Against Encumbrances on The Affordable Housing Site.** Except as provided above, at all times prior to the Termination Date, the Affordable Housing Site shall be maintained in good and clean condition and free of monetary liens, encumbrances, or other charges except (i) for any security instruments securing a loan made by a bona fide third-party lender to finance acquisition, construction, development and/or operation on the Affordable Housing Site which includes no less than ninety (90) Affordable Dwelling Units; (ii) regulatory agreements related the financing, acquisition, construction, development and/or operation of the Affordable Dwelling Units or (iii) as may be approved in advance, in writing, by the City, signed by its City Manager. In the event of an unapproved monetary encumbrance or impairment of the Affordable Housing Site, as security for performance of this Agreement, the City in its discretion may give notice requiring the Developers to immediately meet and confer to arrange for timely corrective action or acceptable alternative security; in the event such efforts do not resolve the situation, the City may invoke any necessary remedy to cause the cure of the unauthorized encumbrance or impairment.

7. **Deposit of Housing Impact Fee.** The City and Developers agree it is in the best interests of the City and its residents to cause the construction of the Affordable Dwelling Units upon the Affordable Housing Site. Nonetheless, in the event that the Housing Impact Fee is due as to any Dwelling Unit before a Satisfaction Event (as defined herein) has occurred, the Harbor Pointe Project and the Willow Project shall deposit into escrow the required Affordable Housing Impact Fees. The parties have previously entered into an "Escrow Agreement for Satisfaction of

Housing Impact Fee Obligation" entered into effective as of June 9, 2022, 2022 establishing an escrow for the deposit of Affordable Housing Fees for the Harbor Pointe Project (the "**Escrow Agreement**"). Currently, the Developers do not anticipate a need to escrow Affordable Housing Fees for the Willow Project because they intend to satisfy the conditions to return the Affordable Housing Fee deposit set forth in Section 3(a) of the Escrow Agreement (the "**Satisfaction Event**") prior to obtaining building permits on the Willow Project. In the event the Willow Project seeks to obtain a building permit and a Satisfaction Event has not occurred, City and Developers shall enter into a Willow Project escrow agreement substantially in the form of the Escrow Agreement prior to the issuance of the first building permit.

8. **Failure to Timely Complete Construction; Security.** If completion of construction as required by Section 5 does not occur within the time period stated above, then the entire Affordable Housing Site shall be deeded to the City, free of any monetary liens, encumbrances or other charges (except as provided in Section 6.2 and other than a lien for current property taxes) upon written demand by the City, provided, however, the City shall make no such demand if prior to the date set forth in Section 5 construction of the Affordable Housing Units has commenced and is proceeding towards completion in the ordinary course of construction. The covenant to convey the Affordable Housing Site shall be included in the Restrictive Covenant required by Section 6.2 and shall bind the Affordable Housing Site. City shall subordinate the covenant to convey the Affordable Housing Site to any construction financing for the Affordable Housing Units. Upon recordation of the Restrictive Covenant and the occurrence of a Satisfaction Event, the Harbor Pointe Project and the Willow Project shall not be required to pay in-lieu affordable housing impact fees.

9. **Modification, Amendment, or Cancellation**.

9.1 **Amendment and Cancellation**. This Agreement may be amended or canceled, in whole or in part, by mutual written consent of the City and the Developers or their successors-in-interest.

9.2 **Modification**. The City Manager, with the consent of the Developers, may make non-substantive modifications to the Agreement without the need for formal action by the City Council.

10. **No Third Party Beneficiaries**. This Agreement is made and entered into for the sole protection and benefit of the City, the Developers, and their respective successors and assigns. No other person or entity shall have any right of action based upon any provision of this Agreement, except to the extent that successors-in-interest to the Harbor Pointe Property and the Willow Property may rely upon this Agreement to demonstrate compliance with the satisfaction of each project's respective affordable housing obligation, as set forth herein.

11. **Miscellaneous**.

11.1 Notices. All notices which are allowed or required to be given hereunder shall be in writing and (1) shall be deemed given and received when personally delivered, or (2) shall be sent by registered or certified mail or overnight mail service, addressed to the

applicable designated person by one party to the other in writing, and shall be deemed received on the second business day after such mailing.

If to City:	City of Newark 37101 Newark Blvd. Newark, CA 94560 Attn: City Planning Director Telephone: (510) 578-4000 Fax: 510-578-4307
If to Willow Owner:	The Willow Project Owner, LLC 888 San Clemente, Suite 100 Newport Beach, CA 92660 Attn: Evan Knapp and Caren Read, Esq. Telephone: (949) 720-3612 Fax: (949) 720-3613
Copy to:	Rutan & Tucker, LLP 18575 Jamboree Road, 9th Floor Irvine, CA 92612 Attn: Hans Van Ligten, Esq. Telephone: (714) 641-5100 Fax: (714) 546-9035 Email: Hvanligten@rutan.com
If to Lennar:	Lennar Homes of California, LLC 2000 Five Pointe, Suite 340 Irvine, CA 92618 Attn: Laura Mask, Esq. Telephone No.: (949) 349-8021 Email: Laura.Mask@Lennar.com
With a copy to:	Deverich & Gillman LLP 4 Park Plaza, Suite 520 Irvine, CA 92614 Attn: Jay Deverich, Esq. Telephone: (949) 483-8603 Fax: (949) 483-8650 Email: jdeverich@dgllp.com

11.2 Severability. If any part of this Agreement is declared invalid for any reason, such invalidity shall not affect the validity of the remainder of the Agreement unless the invalid provision is a material part of the Agreement. The other parts of this Agreement shall remain in effect as if this Agreement had been executed without the invalid part.

11.3 Entire Agreement. This Agreement represents the entire agreement between the City and the Developers with respect to the subject matter hereof, and supersedes all prior agreements and understandings, whether oral or written, between the City and the Developers with respect to the matters contained in this Agreement.

11.4 Further Assurances. The City and the Developers agree to perform, from time to time, such further acts and to execute and deliver such further instruments reasonably to effect the intents and purposes of this Agreement, provided that the intended obligations of the City and the Developers are not thereby modified.

11.5 Assignment. This Agreement shall inure to the benefit of and bind the successors and assigns of the City and the Developers and may be assigned by either the City or the Developers to any party or parties purchasing all or any part of the fee interest in the Property. The provisions of this Section 11.5 shall be self-executing and shall not require the execution or recordation of any further document or instrument. Upon the sale, transfer or assignment of all or a portion of the Property to a party that acquires fee title to the Property or any portion thereof, Developers shall be released of all executory obligations under this Agreement that relate to the transferred property; provided, however, that Developers shall not be released from liability for any default of Developers committed prior to the date of the transfer.

11.6 Attorney's Fees. In the event of any claim, dispute or controversy arising out of or relating to this Agreement, including an action for declaratory relief, the prevailing party in such action or proceeding shall be entitled to recover its court costs and reasonable out-of-pocket expenses.

11.7 Force Majeure. Performance by either party hereunder shall not be deemed to be in default where delays or defaults are due to one or more of the following events, providing that anyone or more of such event(s) actually delays or interferes with the timely performance of the matter to which it would apply and despite the exercise of diligence and good business practices and such event(s) are beyond the reasonable control of the party claiming such interference: war, terrorism, terrorist acts, insurrection, strikes, lock-outs, unavailability in the marketplace of essential labor, tools, materials or supplies, failure of any contractor, subcontractor, or consultant to timely perform (so long as Developers are not otherwise in default of any obligation under this Agreement and is exercising commercially reasonable diligence of such contractor, subcontractor or consultant to perform, riots, floods, earthquakes, fires, casualties, acts of God, acts of the public enemy, epidemics, pandemics, quarantine restrictions, freight embargoes, lack of transportation, governmental restrictions or priority, or unusually severe weather. An extension of time for any such cause (a "**Force Majeure Delay**") shall be for the period of the enforced delay and shall commence to run from the time of the commencement of the cause, if notice by the party claiming such extension is sent to the other party within thirty (30) days of actual knowledge of the commencement of the cause. Notwithstanding the foregoing, none of the foregoing events shall constitute a Force Majeure Delay unless and until the party claiming such delay and interference delivers to the other party written notice describing the event, its cause, when and how such party obtained knowledge, the date and the event commenced, and the estimated delay resulting therefrom.

11.8 Counterparts. This Agreement and any modifications, amendments or supplements thereto may be executed in several counterparts, and all so executed shall constitute one agreement binding on all parties hereto, notwithstanding that all parties are not signatories to the original or the same counterpart. The parties may also deliver executed copies of this Agreement to each other by electronic mail (including pdf or any electronic signature complying with the U.S. federal ESIGN Act of 2000, e.g., www.docusign.com) or other transmission method and any counterpart so delivered shall be deemed to have been duly and validly delivered and be valid and effective for all purposes. No party may raise the use of any image transmission device or method or the fact that any signature was transmitted as an image as a defense to the enforcement of this Agreement. At the request of either party, the parties will confirm signatures by signing and delivering an original document.

[Signatures on next page]

IN WITNESS WHEREOF, the City and Developers hereto have each executed this Agreement as of the date first written above.

"CITY"

CITY OF NEWARK,
a California municipal corporation

_____
Mayor

ATTEST:

_____
City Clerk

"WILLOW OWNER"

THE WILLOW PROJECT OWNER, LLC,
a Delaware limited liability company

By: KPMW Integral, LLC,
a California limited liability company, Its Managing Member

By:_____
Name:_____
Title:_____

"LENNAR"

LENNAR HOMES OF CALIFORNIA, LLC,
a California limited liability company

By:_____
Name:_____
Title:_____

EXHIBIT A

LEGAL DESCRIPTION OF HARBOR POINTE PROPERTY

Real property in the City of Newark, County of Alameda, State of California, described as follows:

RESULTANT PARCEL A OF THE CERTIFICATE OF COMPLIANCE RECORDED JULY 19, 2018 AS INSTRUMENT NO. 2018141561, OFFICIAL RECORDS OF ALAMEDA COUNTY, BEING A PORTION OF PARCELS A AND B, AS SAID PARCELS A AND B ARE SHOWN AND SO DESIGNATED ON THAT CERTAIN PARCEL MAP "ENTITLED PARCEL MAP 3120", FILED FOR RECORD OCTOBER 21, 1980, IN BOOK 121 OF MAPS AND PLATS, AT PAGE 43, IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY, MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE NORTHWESTERN CORNER OF SAID PARCEL B (121 m 43);

THENCE, FROM SAID POINT OF BEGINNING, ALONG THE NORTHERLY LINE OF SAID PARCEL B, NORTH 68° 14' 57" EAST 1041.58 FEET;

THENCE, LEAVING SAID NORTHERLY LINE, SOUTH 21° 45' 40" EAST 636.81 FEET;

THENCE, NORTH 67° 00' 30" EAST 394.70 FEET;

THENCE, NORTH 64° 29' 17" EAST 450.20 FEET TO THE EXTERIOR BOUNDARY OF SAID PARCEL B;

THENCE, ALONG THE EXTERIOR BOUNDARY OF PARCELS A AND B, THE FOLLOWING THIRTEEN (13) COURSES:

1) SOUTH 21° 48' 29" EAST 80.00 FEET,
2) NORTH 68° 16' 30" EAST 1.00 FOOT,
3) SOUTH 21° 48' 29" EAST 133.69 FEET,
4) SOUTH 66° 56' 09" WEST 895.14 FEET,
5) NORTH 47° 57' 44" WEST 129.92 FEET,
6) NORTH 86° 02' 31" WEST 209.77 FEET,
7) SOUTH 88° 55' 10" WEST 316.05 FEET,
8) NORTH 87° 54' 52" WEST 92.04 FEET,
9) SOUTH 86° 15' 10" WEST 80.20 FEET,
10) NORTH 86° 14' 55" WEST 281.11 FEET,
11) SOUTH 80° 10' 43" WEST 163.02 FEET,
12) NORTH 00° 53' 19" EAST 284.64 FEET,
13) NORTH 00° 55' 02" EAST 37.28 FEET, TO SAID POINT OF BEGINNING.

APN: a portion of 537-0852-001-02, a portion of 537-0852-002-07, AND all of 537-0852-002-08

EXHIBIT B

LEGAL DESCRIPTION OF WILLOW PROPERTY

That certain real property in the City of Newark, County of Alameda, State of California, legally described as: (1) Parcel 1 of Parcel Map No. 11072, in Book 348 Pages 32 and 33 of Maps, in the Official Records of the County Recorder of Alameda County, California ("Parcel A") and (2) Parcel 2 of Parcel Map No. 11071, in Book 348, Pages 34 and 35 of Maps, in the Official Records of the County Recorder of Alameda County, California.

Together with a non-exclusive easement, appurtenant to and for the benefit of Parcel A, for ingress and egress on, over and across that twenty (20) foot wide area identified as "20' PAE" on Parcel 2 of Parcel Map No. 11071, in Book 348, Pages 34 and 35 of Maps, in the Official Records of the County Recorder of Alameda County, California.

EXHIBIT C

FORM OF AFFORDABLE HOUSING DECLARATION

[Attached]

Recording requested by and when recorded mail to: City of Newark 37101 Newark Blvd. Newark, CA 94560 Attn: Community Development Director EXEMPT FROM RECORDING FEES PER GOVERNMENT CODE §§6103, 27383	
APN:	Space above this line for Recorder's use.

AFFORDABLE HOUSING REGULATORY AGREEMENT

AND

DECLARATION OF RESTRICTIVE COVENANTS

by and between

THE CITY OF NEWARK

AND

[AFFORDABLE HOUSING DEVELOPER]

Dated _____, 2022

This Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants (this "Agreement") is entered into effective as of _____, 2022 (the "Effective Date") by and between the City of Newark, a California municipal corporation (the "City") and [TBD: Affordable Housing Developer] ("Affordable Developer"). City and Affordable Developer are hereinafter collectively referred to as the "Parties."

RECITALS

A. Newark Municipal Code ("NMC") chapter 17.18 requires that developers of residential housing units pay a housing impact fee to contribute to the supply of housing for households with very low, low, and moderate incomes. The amount of the housing impact fee was established by the Newark City Council pursuant to Resolution No. 10,184.

B. NMC Section 17.18.050 allows a developer to provide on-site affordable units as an alternative to paying the housing impact fee, provided that the proposed alternative means of compliance is approved by the City Council in accordance with the procedures set forth in Section 17.18.050.

C. The City previously approved a vesting tentative map and related entitlements for approximately seventeen and 1/10 (17.1) acres of real property in the City of Newark, California, (the "Willow Property"). Pursuant to that approval, Lennar Homes of California, LLC, plans to develop the Willow Property with approximately 279 market rate dwelling units, which is sometimes referred to as the "Willow Project".

D. The Parcel C Project Owner, LLC, a Delaware limited liability company, previously obtained entitlements for approximately seventeen and 4/10 acres (17.4) acres of real property in the City of Newark, California, (the "Harbor Pointe Property"). The Harbor Pointe Property is currently owned by Lennar Homes of California, LLC, a California limited liability company ("Lennar"). Lennar plans to develop the Harbor Pointe Property with approximately 192 market rate dwelling units, which is sometimes referred to as the "Harbor Pointe Project".

E. Affordable Developer is constructing a ninety-one unit multi-family residential building (the "Affordable Housing Project" or "Project") on the real property more particularly described in Exhibit A attached hereto and incorporated herein (the "Property"), of which ninety (90) of the units shall be affordable to and occupied by or available for occupancy by income eligible households (the "Restricted Units").

F. Construction of the Affordable Housing Project is an alternate means of compliance to satisfy the affordable housing obligations under NMC chapter 17.18 for both the Harbor Pointe Project and the Willow Project

G. The affordability restrictions imposed on the Restricted Units will last for a period of fifty-five (55) years.

H. The City is not providing any financial support for the construction of the Project, and the Affordable Developer has requested the City enter into this Agreement.

I. The Parties have agreed to enter into and record this Agreement in order to satisfy the conditions described in the foregoing Recitals and in NMC section 17.18.060. The purpose of this Agreement is to regulate and restrict the occupancy and rents of the Project's Restricted Units for the benefit of the Project occupants and the City. The covenants in this Agreement are intended to run with the land and be binding on Affordable Developer and Affordable Developer's successors and assigns for the full term of this Agreement.

NOW THEREFORE, in consideration of the foregoing, and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

1. Definitions. The following terms have the meanings set forth in this Section wherever used in this Agreement or the attached exhibits.

1.1 "Actual Household Size" shall mean the actual number of persons in the applicable household.

1.2 "Area Median Income" or "AMI" means the area median income for Alameda County, California, adjusted for Actual Household Size, determined periodically by the California Department of Housing and Community Development ("HCD") as published in Section 6932 of Title 25 of the California Code of Regulations ("Regulations") or successor provision published pursuant to California Health and Safety Code Section 50093(c). If HCD ceases to make such determination, Area Median Income shall be the median income applicable to Alameda County, with adjustments for Actual Household Size, as determined from time to time by the U.S. Department of Housing and Urban Development ("HUD") pursuant to the United States Housing Act of 1937 as amended, or such other method of median income calculation applicable to the City of Newark that HUD may hereafter adopt in connection with such Act.

1.3 "Assumed Household Size" means the household size "adjusted for family size appropriate to the unit" in accordance with Health and Safety Code section 50052.5.

1.4 "Eligible Household" means a household for which total household income upon initial occupancy does not exceed the maximum income level for a Restricted Unit as specified in Sections 2.1 and 2.2.

1.5 "Household Income" shall mean the total anticipated annual income of all persons in a household for the twelve-month period following the date of determination of income pursuant to the method of calculation of gross income as provided in 25 California Code of Regulations Section 6914.

1.6 "Low Income Household" means an annual gross income that is greater than fifty-percent (50%) and not greater than eighty percent (80%) of Area Median Income.

1.7 "Low Income Unit" shall mean the Restricted Units that pursuant to Section 2.1 below, are required to be occupied by Low Income Households.

1.8 "Moderate Income Household" means an annual gross income that is greater than eighty percent (80%) and not greater than one hundred twenty percent (120%) of Area Median Income.

1.9 "Moderate Income Unit" shall mean the Restricted Units that pursuant to Section 2.1 below, are required to be occupied by Moderate Income Households.

1.10 "Project" shall mean the Property and the ninety (90) affordable units and one (1) manager's unit to be developed on the Property, and any additional improvements and all landscaping, roads and parking spaces existing thereon, as the same may from time to time exist.

1.11 "Qualifying Rent" means a monthly Rent that does not exceed the amounts set forth in Section 2.2 and 2.3 below.

1.12 "Rent" shall mean the total of monthly payments by the Tenants of a Restricted Unit for the following: use and occupancy of the Restricted Unit and land and associated facilities, including one parking space per Restricted Unit; any separately charged fees or service charges assessed by Affordable Developer that are required of all tenants, other than security deposits; an allowance for utilities paid by the tenant calculated as set forth below and including garbage collection, sewer, water, electricity, gas and other heating, cooking and refrigeration fuel, but not cable, internet, or telephone service; any other interest, taxes, fees or charges for use of the land or associated facilities and assessed by a public or private entity other than Affordable Developer, and paid by the Tenant on a non-optional basis. Utility allowances shall equal the utility allowance published by the Alameda County Housing Authority, or if no such allowance is published, by a similar public agency approved by the City.

1.13 "Restricted Unit" means a dwelling unit in the Project which is reserved for occupancy at a Qualifying Rent by a Very Low Income Household, Low Income Household, or Moderate-Income Household, in accordance with and as set forth in Sections 2.1 and 2.2.

1.14 "Tenant" shall mean a household occupying a Restricted Unit.

1.15 "Term" means the term of this Regulatory Agreement, which commences as of the Effective Date and shall terminate on the fifty-fifth (55th) anniversary of the issuance of the certificate of occupancy for the Project, or if the such issuance date cannot be determined then until the fifty-seventh (57th) anniversary of the recordation of this Agreement.

1.16 "Very Low Income Household" means an annual gross income that is greater than thirty percent (30%) and not greater than fifty percent (50%) of Area Median Income.

1.17 "Very Low Income Unit" shall mean the Restricted Units that pursuant to Section 2.1 below, are required to be occupied by Very Low Income Households.

2. Use and Affordability Restrictions. Affordable Developer hereby covenants and agrees, for itself and its successors and assigns, that the Property shall be subject to the occupancy and affordability restrictions set forth herein for the Term of this Agreement. Affordable Developer represents and warrants that it has not entered into any agreement that would restrict or compromise its ability to comply with the occupancy and affordability restrictions set forth in this Agreement, and Affordable Developer covenants that it shall not enter into any agreement that is inconsistent with such restrictions without the express written consent of City. Notwithstanding the foregoing or anything to the contrary contained herein, if the terms of financing for the Project require greater affordability restrictions than those imposed hereby, the requirements of such other financing shall prevail for the term thereof.

2.1 Occupancy Requirements.

2.1.1 Unit Mix. For the Term of the Agreement, no fewer than ninty (90) of the dwelling units in the Project shall be occupied (or if vacant, available for occupancy) by households as indicated below. Subject to Section 2, the mix of the Restricted Units shall be as follows.

	Units
Very Low-Income Household (30-50% AMI)	47
Low Income Household (50-80% AMI)	23
Moderate Income Household (80-120% AMI)	20
Manager Unit (Unrestricted)	1
Total	91

2.1.2 Manager's Unit. One (1) dwelling unit in the Project may be used as a resident manager's unit, and shall be exempt from the occupancy and rent restrictions set forth in Sections 2.1 and 2.2 of this Agreement. The manager's unit shall be a two bedroom unit.

2.2 Qualifying Rents for Restricted Units.

2.2.1 Rent Formula for Qualifying Rents.

(a) Very Low Income Unit Rent. Subject to the provisions of Section 2.3 below, the Rent charged to Tenants of the Very Low Income Units shall not exceed one-twelfth (1/12th) of thirty percent of fifty percent (50%) of Area Median Income, adjusted for Assumed Household Size.

(b) Low Income Unit Rent. Subject to the provisions of Section 2.3 below, the Rent charged to Tenants of the Low Income Units shall not exceed one-twelfth (1/12th) of thirty percent of sixty percent (60%) of Area Median Income, adjusted for Assumed Household Size. If a Tenant's Household Income is greater than sixty (60%), but less than eighty percent (80%) , of AMI, the Rent shall not exceed one-twelfth (1/12th) of thirty percent (30%) times the Tenant's actual Household Income.

(c) Moderate Income Unit Rent. Subject to the provisions of Section 2.3 below, the Rent charged to Tenants of the Moderate Income Units shall not exceed one-twelfth (1/12th) of thirty percent of one hundred ten percent (110%) of Area Median Income, adjusted for Assumed Household Size. If a Tenant's Household Income is greater than one hundred ten percent (110%), but less than one hundred twenty percent (120%), of AMI, the Rent shall not exceed one-twelfth (1/12th) of thirty percent (30%) times the Tenant's actual Household Income.

2.2.2 Rent Amount. The Rent for all Restricted Units must be approved by the City prior to the initial occupancy of the Restricted Units. No later than sixty (60) days prior to the proposed effective date of any Rent increase affecting a Restricted Unit, Affordable Developer shall submit to the City a schedule of any proposed increase in the Rent charged for the Restricted Units. The City shall have fifteen (15) calendar days to approve or reject the proposed Rent based on the requirements herein. If the City does not respond in the required time, the proposed Rent shall be deemed approved.

2.2.3 Rents Increases. The Rent for Restricted Units may be increased no more than once annually based upon updated rent schedules corresponding to the updated Area Median Income and/or increases to a Tenant's Household Income or Actual Household Size as published by HUD. Affordable Developer shall provide Tenants of Restricted Units with sixty (60) days' notice in advance of the effective date for all Rent increase, or such other notice as required by applicable law.

2.3 Increased Income of Occupying Households.

2.3.1 Increased Income. In the event that recertification of Tenant incomes, the Affordable Developer determines that a Very-Low Income Household or Low-Income Houshold no longer qualifies as a Very-Low Income or Low-

Income, but does qualify as a Low Income Household or Moderate Income Household, such household's Restricted Unit shall be considered a Low Income Unit or Moderate Income Unit, as appropriate (and the Rent may be increased to the Rent allowed for such unit under Section 2.2). The Affordable Developer shall rent the next available dwelling unit(s) in the Project to Eligible Household(s) at the appropriate Qualifying Rent until the requirements of Section 2.1 and this Agreement are satisfied.

2.3.2 Non-Qualifying Household. If, upon recertification of a Tenant's income, the Affordable Developer determines that a Tenant has an Adjusted Income exceeding the qualifying income for a Moderate Income Household, then upon the expiration of such Tenant's lease and following one hundred eighty (180) days' notice, and if so permitted by local and state law and applicable requirements of the California Tax Credit Allocation Committee, such Tenant shall be required to vacate the Restricted Unit. Affordable Developer shall rent the Restricted Unit to a Very Low Income Household, Low Income Household, or Moderate Income Household as required by Section 2.1 of this Agreement.

2.3.3 Continued Compliance. In the event an occupant household's income increases and the rent is increased as set forth in Sections 2.3.1- 2.3.2 above, the Restricted Unit shall continue to be classified as a Very Low Income Unit, Low Income Unit, or Moderate Income Unit, as applicable, and Affordable Developer shall be deemed to be in compliance with the provisions of Section 2.1, 2.2, and 2.3 of this Agreement, until such time as the Tenant is required to vacate the Restricted Unit under Section 2.3.2.

2.4 Preferences. In renting Restricted Units, Affordable Developer shall give first preference to Eligible Households in which at least one member lives or works in the City of Newark, and second preference to Eligible Households in which at least one member lives or works in the Alameda County, unless compliance with the foregoing criteria is prohibited by law or by state or federal sources of financing for the Project, in which case Affordable Developer shall notify City of this fact in writing.

2.5 No Condominium Conversion. Affordable Developer shall not convert the Restricted Units to condominium or cooperative ownership or sell condominium or cooperative rights to the Restricted Units during the term of this Agreement.

2.6 Intentionally Deleted.

2.7 Non-Discrimination; Compliance with Fair Housing Laws.

2.7.1 Fair Housing. Affordable Developer shall comply with state and federal fair housing laws in the marketing and rental of the Restricted Units in the Project. Affordable Developer shall accept as tenants, on the same basis as all other prospective tenants, persons who are recipients of federal

certificates or vouchers for rent subsidies pursuant to the existing Section 8 program or any successor thereto.

2.7.2 Non-Discrimination. The Affordable Developer covenants by and for itself and any successors in interest that there shall be no discrimination against or segregation of any person or group of persons, on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the leasing, subleasing, transferring, use, occupancy, tenure, or enjoyment of the dwelling units at the Property and the Project, nor shall the Affordable Developer itself or any person claiming under or through it establish or permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy for the dwelling units of tenants, lessees, subtenants, sublessees or vendees of the Property. The foregoing covenants shall run with the land for the duration of this Agreement.

3. Income Certification & Reporting

3.1 Reporting Requirements.

3.1.1 Tenant Certification. Affordable Developer or Affordable Developer's authorized agent shall obtain from each household prior to initial occupancy of each Restricted Unit, and on every anniversary thereafter, a written certificate containing all of the following in such format and with such supporting documentation as City may reasonably require:

(a) The identity and age of each member of the household; and

(b) Total Household Income.

3.1.2 The Affordable Developer shall make a good faith effort to verify that the income provided by an applicant or occupying household in an income certification is accurate by taking one or more of the following steps as a part of the verification process: (1) obtain a pay stub for the most recent pay period; (2) obtain an income tax return for the most recent tax year; (3) conduct a credit agency or similar search; (4) obtain an income verification form from the applicant's current employer; (5) obtain an income verification form from the Social Security Administration and/or the California Department of Social Services if the applicant receives assistance from either of such agencies; or (6) if the applicant is unemployed and has no such tax return, obtain another form of independent verification.

3.1.3 Affordable Developer shall retain such certificated for not less than three (3) years, and upon City's request, shall make the original available for

inspection by the City and shall provide copies of such certificates to the City.

3.1.4 During such time that the Project is subject to a regulatory agreement restricting occupancy and/or rents pursuant to requirements imposed in connection with the use of federal low-income housing tax credits or tax-exempt financing, Affordable Developer may satisfy the requirements of this Section by providing City with a copy of tenant income certifications in connection with such financing.

3.2 Annual Report; Inspections. No later than the ninetieth (90th) day of each year after the close of each fiscal year of the City during the Term, commencing with the year following the initial leasing of the Restricted Units, Affordable Developer shall submit an annual report ("Annual Report") to the City in form satisfactory to City, together with a certification that the Project is in compliance with the requirements of this Agreement.

3.2.1 The Annual Report shall, at a minimum, include the following information for each dwelling Restricted Unit in the Project:

(a) Unit number;

(b) Current rent and other charges;

(c) Dates of any vacancies during the previous year;

(d) Number of people residing in the unit;

(e) Total Household Income of residents;

(f) Documentation of source of household income; and

(g) The information required by Section 3.1.1.

(h) Any other information reasonable requested by City

3.2.2 Upon City's request, Affordable Developer shall include with the Annual Report, an income recertification for each household, documentation verifying tenant eligibility, and such additional information as City may reasonably request from time to time in order to show compliance with this Agreement. The Annual Report shall conform to the format requested by City; provided however, during such time that the Project is subject to a regulatory agreement restricting occupancy and/or rents pursuant to requirements imposed in connection with the use of federal low-income housing tax credits or tax-exempt financing, Affordable Developer may satisfy the requirements of this Section by providing City with a copy of compliance reports required in connection with such financing.

3.3 On-site Inspection. Affordable Developer shall permit representatives of City to enter and inspect the Property and the Project during reasonable business hours in order to monitor compliance with this Agreement upon five (5) business days written advance notice of such visit to Affordable Developer or to Affordable Developer's management agent.

3.4 Additional Information. Affordable Developer shall provide any additional information reasonably requested by City to monitor compliance with this Agreement. The City shall have the right to examine and make copies of all books, records, or other documents of the Affordable Developer that pertain to the Affordable Developer's compliance with its obligations under this Agreement.

3.5 Records. The Affordable Developer shall maintain complete, accurate and current records pertaining to the Restricted Units, and shall permit any duly authorized representative of the City to inspect records, including records pertaining to income and household size for tenants occupying the Restricted Units during normal business hours on not less than three (3) business days' prior written notice. All tenant lists, applications and waiting lists relating to the Restricted Units shall at all times be kept separate and identifiable from any other business of the Affordable Developer and shall be maintained as required by the City in a reasonable condition for proper audit and subject to examination during business hours by representatives of the City. The Affordable Developer shall retain copies of all materials obtained or produced with respect to occupancy of the Restricted Units for a period of three (3) years.

4. Term of Agreement.

4.1 Term of Restrictions. This Agreement shall remain in effect through the Term.

4.2 Effectiveness Survives Conveyance of Property. This Agreement shall remain effective and fully binding for the full Term hereof regardless of any sale, assignment, transfer, or conveyance of the Property or the Project or any part thereof or interest therein.

4.3 Reconveyance. Upon the termination of this Agreement, the Parties agree to execute and record appropriate instruments to release and discharge the terms of this Agreement; provided, however, the execution and recordation of such instruments shall not be necessary or a prerequisite to the termination of this Agreement in accordance with its terms.

4.4 Notice of Expiration of Term. Affordable Developer provide: (i) a twelve (12) month notice to existing Tenants, prospective Tenants, and the City prior to the expiration of the Term, and (ii) a six (6) month notice to existing Tenants, prospective Tenants, and the City prior to the expiration of the Term. Such notice shall inform recipients of the date the restrictions contained in this Agreement will expire and whether the Affordable Developer intends to thereafter increase Rents by an amount greater than would be allowed hereunder if the Agreement was still

in effect. The six (6) month notice required under this section shall also contain the terms and conditions for a Tenant to continue to occupy a dwelling unit in the Project, including the amount of the Rent the Tenant will be required to pay after the expiration of the term. Such notice shall be in addition to any other notice required by law. Failure to provide such notice shall extend the term of the Agreement for as long as necessary for such notice to be provided.

5. Binding Upon Successors; Covenants to Run with the Land.

5.1 Affordable Developer hereby subjects its interest in the Property and the Project to the covenants and restrictions set forth in this Agreement. The City and Affordable Developer hereby declare their express intent that the covenants and restrictions set forth herein shall be deemed covenants running with the land for the duration of this Agreement and shall be binding upon and inure to the benefit of the heirs, administrators, executors, successors in interest, transferees, and assigns of Affordable Developer and City, regardless of any sale, assignment, conveyance or transfer of the Property and the Project or any part thereof or interest therein. Any successor-in-interest to Affordable Developer, including without limitation any purchaser, transferee or lessee of the Property and the Project (other than the tenants of retail space at the Property or the individual dwelling units within the Project) shall be subject to all of the duties and obligations imposed hereby for the full term of this Agreement. Each and every contract, deed, ground lease or other instrument affecting or conveying the Property and the Project, shall conclusively be held to have been executed, delivered and accepted subject to the covenants, restrictions, duties and obligations set forth herein, regardless of whether such covenants, restrictions, duties and obligations are set forth in such contract, deed, ground lease or other instrument. If any such contract, deed, ground lease or other instrument has been executed prior to the date hereof, Affordable Developer hereby covenants to obtain and deliver to City an instrument in recordable form signed by the parties to such contract, deed, ground lease or other instrument pursuant to which such parties acknowledge and accept this Agreement and agree to be bound hereby.

5.2 Affordable Developer agrees for itself and for its successors that in the event that a court of competent jurisdiction determines that the covenants herein do not run with the land, such covenants shall be enforced as equitable servitudes against the Property and the Project in favor of City.

6. Property Management; Repair and Maintenance; Marketing.

6.1 Management Responsibilities. Affordable Developer shall be responsible for all management functions with respect to the Property and the Project, including without limitation the selection of tenants, certification and recertification of household income and eligibility, evictions, collection of rents and deposits, maintenance, landscaping, routine and extraordinary repairs, replacement of capital items, and security. Except as City may otherwise agree in writing, City

shall have no responsibility for management or maintenance of the Property or the Project.

6.2 Management Entity. Unless managed directly by Affordable Developer, the Project shall at all times be managed by an experienced management agent with demonstrated ability to operate residential facilities like the Project in a manner that will provide decent, safe, and sanitary housing (the "Management Agent").

6.2.1 Performance Review. City reserves the right to conduct an annual (or more frequently, if deemed reasonably necessary by City) review of the management practices and financial status of the Restricted Units. The purpose of each periodic review will be to enable City to determine if the Restricted Units are being operated and managed in accordance with the requirements and standards of this Agreement. The Affordable Developer shall cooperate with City in such reviews.

6.3 Repair, Maintenance and Security. Throughout the term of this Agreement, Affordable Developer shall at its own expense, maintain the Property and Project in good physical condition, in good repair, and in decent, safe, sanitary, habitable and tenantable living conditions in conformity with all applicable state, federal, and local laws, ordinances, codes, and regulations. Without limiting the foregoing, Affordable Developer agrees to maintain the Property and Project (including, without limitation, the Restricted Units, commons areas, landscaping, driveways and walkways) in a condition free of all waste, nuisance, debris, graffiti, disrepair, abandoned appliances, unmaintained landscaping, and illegal activity, and shall take all reasonable steps to prevent the same from occurring within the Property and Project. Affordable Developer shall prevent and/or rectify any physical deterioration of the Property and Project, other than reasonable wear and tear, and shall make all repairs, renewals and replacements necessary to keep the Property and improvements thereon in good condition and repair.

6.3.1 City's Right to Perform Maintenance. In the event that Affordable Developer breaches any of the covenants contained in Section 6.3, and such default continues for a period of ten (10) days after written notice from City (with respect to graffiti, debris, and waste material) or thirty (30) days after written notice from City (with respect to building improvements and general maintenance), then City, in addition to any other remedy it may have under this Agreement or at law or in equity, shall have the right, but not the obligation, to enter upon the Property and perform all acts and work necessary to protect, maintain, and preserve the Property and improvements thereon.

6.3.2 Costs. All costs expended by City in connection with the foregoing, shall constitute an indebtedness owed by Affordable Developer, and shall be paid by Affordable Developer to City upon demand. All such sums

remaining unpaid thirty (30) days following delivery of City's itemized invoice therefor shall bear interest at the rate of 10% per annum.

6.4 Marketing Plan. Prior to the issuance of the first certificate of occupancy for the Project, Affordable Developer shall submit for City review and approval, a plan for marketing the Restricted Units ("Marketing Plan"). The Marketing Plan shall address in detail how Affordable Developer plans to market the Restricted Units to prospective Eligible Households in accordance with fair housing laws and this Agreement, Affordable Developer's tenant selection criteria, and how Affordable Developer plans to certify the eligibility of Eligible Households. Affordable Developer shall abide by the terms of the Marketing Plan in marketing, the Restricted Units, and throughout the term of this Agreement, shall submit proposed modifications to City for its information.

6.5 Approval of Amendments. If City has not responded to any submission of the Marketing Plan, within 30 days following City's receipt of such plan, the plan, shall be deemed approved by City.

6.6 Fees, Taxes, and Other Levies. Affordable Developer shall be responsible for payment of all fees, assessments, taxes, charges, liens and levies, including without limitation possessory interest taxes, if applicable, imposed by any public authority or utility company with respect to the Property or the Project, and shall pay such charges prior to delinquency. However, Affordable Developer shall not be required to pay any such charge so long as: i) Affordable Developer is contesting such charge in good faith and by appropriate proceedings, ii) Affordable Developer maintains reserves adequate to pay any contested liabilities, and iii) On final determination of the proceeding or contest, Affordable Developer immediately pays or discharges any decision or judgment rendered against it, together with all costs, charges and interest. Nothing herein shall prohibit Affordable Developer from obtaining and maintaining a property tax abatement or exemption for the Property and the Project.

6.7 Insurance Coverage. Prior to issuance of building permits for the Project, and continuing throughout the term of this Agreement Affordable Developer shall comply with the requirements set forth in Exhibit B, and shall, at Affordable Developer's expense, maintain in full force and effect insurance coverage as specified in Exhibit B; provided however, during such time that lenders providing financing for the Project impose insurance requirements that are inconsistent with the requirements set forth in Exhibit B, Affordable Developer may satisfy the requirements of this Section by meeting the requirements of such lenders. Notwithstanding the foregoing, throughout the term hereof, Affordable Developer shall comply with the provisions of Exhibit B pertaining to: i) Provision to City of proof of insurance for the Project, ii) Naming of the City of Newark as an additional insured, and iii) Provision to City of notice of cancellation or reduction in coverage.

6.8 Property Damage or Destruction. If any part of the Restricted Units are damaged or destroyed, Affordable Developer shall repair or restore the same, consistent with the occupancy and rent restriction requirements set forth in this Agreement. Such work shall be commenced within 120 days after the damage or loss occurs and shall be completed within one year thereafter, provided that insurance proceeds are available to be applied to such repairs or restoration within such period and the repair or restoration is financially feasible, and such commencement and completion are both subject to extension due to force majeure. During such time that lenders providing financing for the construction of the Project impose requirements that differ from the requirements of this Section the requirements of such lenders and investors shall prevail.

7. Recordation; No Subordination. This Agreement shall be recorded in the Official Records of Alameda County. Affordable Developer hereby represents, warrants and covenants that with the exception of easements of record, if any, absent the written consent of City, this Agreement shall not be subordinated in priority to any lien (other than those pertaining to taxes or assessments), encumbrance, or other interest in the Property. If at the time this Agreement is recorded, any interest, lien, or encumbrance has been recorded against the Property in position superior to this Agreement, upon the request of City, Affordable Developer hereby covenants and agrees to promptly undertake all action necessary to clear such matter from title or to subordinate such interest to this Agreement consistent with the intent of and in accordance with this Section 7, and to provide such evidence thereof as City may reasonably request.

8. Mortgagee Protections.

8.1 No violation of any provision contained herein shall defeat or render invalid the lien of any mortgage or deed of trust made in good faith and for value upon all or any portion of the Project or the Property, and the purchaser at any trustee's sale or foreclosure sale shall not be liable for any violation of any provision hereof occurring prior to the acquisition of title by such purchaser. Such purchaser shall be bound by and subject to this Agreement from and after such trustee's sale or foreclosure sale. Promptly upon determining that a violation of this Agreement has occurred, City shall give written notice to the holders of record of any mortgages or deeds of trust encumbering the Project or the Property that such violation has occurred.

8.2 Affordable Developer agrees to use reasonable efforts to ensure that any deed of trust secured by the Project for the benefit of a lender other than City ("Third-Party Lender") shall contain each of the following provisions:

8.2.1 Third-Party Lender shall use its reasonable efforts to provide to City a copy of any notice of default issued to Affordable Developer concurrently with provision of such notice to Affordable Developer (provided however, the failure to do so shall not impair such Third-Party Lender's rights and remedies);

8.2.2 City shall have the reasonable right, but not the obligation, to cure any default by Affordable Developer within the same period of time provided to Affordable Developer for such cure;

8.2.3 Reserved.

8.2.4 Affordable Developer agrees to provide to City a copy of any notice of default Affordable Developer receives from any Third-Party Lender within three (3) business days following Affordable Developer's receipt thereof.

9. Default and Remedies.

9.1 Events of Default. The occurrence of any one or more of the following events shall constitute an event of default hereunder ("Event of Default"):

(a) Subject to Affordable Developer's right to contest the following charges, and the provisions of Section 6.6 hereof, Affordable Developer's failure to pay taxes or assessments due on the Property or the Project or failure to pay any other charge that may result in a lien on the Property or the Project, and Affordable Developer's failure to cure such default within 10 days of receipt of written notice of the same from the City.

(b) Affordable Developer's default in the performance of any term, provision or covenant under this Agreement, and unless such provision specifies a shorter cure period for such default, the continuation of such default for ten (10) days in the event of a monetary default or thirty (30) days in the event of a non-monetary default following the date upon which Affordable Developer shall have received from the City written notice of the default, or if the nature of any such non-monetary default is such that it cannot be cured within thirty (30) days, Affordable Developer's failure to commence to cure the default within thirty (30) days and thereafter prosecute the curing of such default with due diligence and in good faith, but in no event longer than 120 days from receipt of the notice of default, subject to extension due to force majeure.

9.2 Remedies.

9.2.1 If within the applicable cure period, Affordable Developer and Affordable Developer's Third-Party Lender fails to cure a default or fails to commence to cure and diligently pursue completion of a cure, as applicable, or if a cure is not possible, City may proceed with any of the following remedies:

(a) Bring an action for equitable relief seeking the specific performance of the terms and conditions of this Agreement, and/or

enjoining, abating, or preventing any violation of such terms and conditions, and/or seeking declaratory relief unless such violation is the result of the Restricted Units being uninhabitable due to casualties or condemnation;

(b) For violations of obligations with respect to rents for Restricted Units, impose as liquidated damages a charge in an amount equal to the actual amount collected in excess of the Qualifying Rent;

(c) Pursue any other remedy allowed at law or in equity up to the value of the Restricted Units and excluding any incidental, special, exemplary, punitive or consequential damages or any damages other than, or in addition to, actual damages.

9.2.2 Each of the remedies provided herein is cumulative and not exclusive. The City may exercise from time to time any rights and remedies available to it under applicable law or in equity, in addition to, and not in lieu of, any rights and remedies expressly provided in this Agreement.

10. Indemnification.

10.1 Notwithstanding the insurance coverage required hereunder, Affordable Developer shall defend, indemnify and hold the City and its officials, officers, directors, employees, and agents (collectively, the "Indemnified Parties") harmless from and against any and all losses, damages, liabilities, claims, demands, judgments, actions, court costs, and legal or other expenses (including reasonable attorneys' fees) which an Indemnified Party may incur as a result of:

10.1.1 Affordable Developer's failure to perform any obligation as and when required by this Agreement;

10.1.2 Any failure of Affordable Developer's representations or warranties to be true and complete in all material respects when made; or

10.1.3 Any act or omission by Affordable Developer, or any of Affordable Developer's contractors, subcontractors, agents, employees, licenses or suppliers with respect to the Project or the Property except to the extent that such losses are caused by the gross negligence or willful misconduct of such Indemnified Party.

10.2 Affordable Developer shall pay immediately upon an Indemnified Party's demand any amounts owing under the indemnity provided under this Section. The duty of Affordable Developer to indemnify includes the duty to defend the Indemnified Party in any court action, administrative action, or other proceeding brought by any third party arising in connection with the Project or the Property with counsel reasonably approved by City. Affordable Developer's duty to indemnify the Indemnified Parties shall survive the expiration or earlier termination of this Agreement.

11. Miscellaneous.

11.1 Amendments. This Agreement may be amended or modified only by a written instrument signed by both Parties.

11.2 No Waiver. Any waiver by City of any term or provision of this Agreement must be in writing. No waiver shall be implied from any delay or failure by City to take action on any breach or default hereunder or to pursue any remedy allowed under this Agreement or applicable law. No failure or delay by City at any time to require strict performance by Affordable Developer of any provision of this Agreement or to exercise any election contained herein or any right, power or remedy hereunder shall be construed as a waiver of any other provision or any succeeding breach of the same or any other provision hereof or a relinquishment for the future of such election.

11.3 Notices. Except as otherwise specified herein, all notices to be sent pursuant to this Agreement shall be made in writing, and sent to the Parties at their respective addresses specified below or to such other address as a Party may designate by written notice delivered to the other parties in accordance with this Section. All such notices shall be sent by: i) Personal delivery, in which case notice is effective upon delivery; ii) Certified or registered mail, return receipt requested, in which case notice shall be deemed delivered upon receipt if delivery is confirmed by a return receipt; iii) Nationally recognized overnight courier, in which case notice is effective on delivery if delivery is confirmed by the delivery service; iv) such other method as mutually agreed by the Parties in writing.

11.3.1 All such notices shall be sent to:

City: City of Newark
37101 Newark Blvd.
Newark, CA 94560
Attn: Community Development Director

Affordable Developer: [To be filed in at time of recordation]]

11.4 Further Assurances. The Parties shall execute, acknowledge and deliver to the other such other documents and instruments, and take such other actions, as either shall reasonably request as may be necessary to carry out the intent of this Agreement.

11.5 Parties Not Co-Venturers. Nothing in this Agreement is intended to or shall establish the Parties as partners, co-venturers, or principal and agent with one another.

11.6 Action by the City. Except as may be otherwise specifically provided herein, whenever any approval, notice, direction, consent or request by the City is required or permitted under this Agreement, such action shall be in writing, and such action may be given, made or taken by the City Manager or designee, without further approval by the governing board of the City Council.

11.7 Non-Liability of Officials, Employees and Agents. No member, official, employee or agent of the City shall be personally liable to Affordable Developer or any successor in interest, in the event of any default or breach by the City, or for any amount of money which may become due to Affordable Developer or its successor or for any obligation of City under this Agreement. No member, director, employee or agent of the Affordable Developer shall be personally liable to City, in the event of any default or breach by the Affordable Developer, or for any amount of money which may become due to City or for any obligation of Affordable Developer under this Agreement.

11.8 Headings; Construction. The headings of the sections and paragraphs of this Agreement are for convenience only and shall not be used to interpret this Agreement. The language of this Agreement shall be construed as a whole according to its fair meaning and not strictly for or against any Party.

11.9 Governing Law & Venue. This Agreement shall be construed in accordance with the laws of the State of California without regard to principles of conflicts of law. The venue for any dispute arising out of this Agreement shall be in the state or federal courts located in Alameda County, California.

11.10 Attorneys' Fees and Costs. If any legal or administrative action is brought to interpret or enforce the terms of this Agreement, the prevailing party shall be entitled to recover all reasonable attorneys' fees and costs incurred in such action.

11.11 Severability. If any provision of this Agreement is held invalid, illegal, or unenforceable by a court of competent jurisdiction, the validity, legality, and enforceability of the remaining provisions shall not be affected or impaired thereby.

11.12 Entire Agreement; Exhibits. This Agreement, together with the Exhibits contains the entire agreement of Parties with respect to the subject matter hereof, and supersedes all prior oral or written agreements between the Parties with respect thereto.

11.13 Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.

IN WITNESS WHEREOF, the Parties have executed this Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants as of the date first written above.

CITY OF NEWARK, a California municipal corporation By:_____ Alan Nagy, Mayor ATTEST: By: _____ Sheila Harrington, City Clerk APPROVED AS TO FORM: By: Kristopher J. Kokotaylo, Interim City Attorney	[AFFORDABLE HOUSING DEVELOPER] By: _____ Title: _____

SIGNATURES MUST BE NOTARIZED.

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
)
COUNTY OF _____)

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify UNDER PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Name: _____
Notary Public

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

)
COUNTY OF _____)

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify UNDER PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Name: _____
Notary Public

Exhibit A

PROPERTY PLAT & LEGAL DESCRIPTION

(Attach plat and legal description of Property)

Exhibit B

INSURANCE REQUIREMENTS

Prior to issuance of building permits for the Project and throughout the term of this Agreement, Owner shall obtain and maintain, at Owner's expense, the following policies of insurance.

A. Property Insurance. Insurance for the risks of direct physical loss, with minimum coverage being the perils insured under the standard Causes of Loss - Special form (ISO Form CP 10 30) or its equivalent, covering all improvements, all fixtures, equipment and personal property, located on or in, or constituting a part of, the Property ("Improvements"), in an amount equal to one hundred percent (100%) of the full replacement cost of all such property.

1. The insurance shall:

(a) Cover explosion of steam and pressure boilers and similar apparatus, if any, located on the Property,

(b) Cover floods if the Property is in a Special Hazard Area, as determined by the Federal Emergency Management City or as shown on a National Flood Insurance Program flood map;

2. The insurance required hereunder shall be in amounts sufficient to prevent Owner from becoming a co-insurer under the terms of the applicable policies, with not more than a Ten Thousand Dollars ($10,000) deductible (or such higher deductible approved by the City, which approval shall not be unreasonably withheld) from the loss payable for any casualty.

3. The policies of insurance carried in accordance with this Paragraph A shall contain a "replacement cost endorsement" and an "increased cost of construction endorsement."

B. Liability Insurance. Commercial general liability insurance on an "occurrence basis" covering all claims with respect to injury or damage to persons or property occurring on, in or about the Property and the Improvements. The limits of liability under this Paragraph B shall be not less than Two Million Dollars ($2,000,000) combined single limit per occurrence, with a deductible no greater than Ten Thousand Dollars

($10,000) or such higher deductible as may be approved by City, which approval shall not be unreasonably withheld.

1. The insurance shall also include coverage for:

(a) Liability for bodily injury or property damage arising out of the use, by or on behalf of Owner, of any owned, non-owned, leased or hired automotive equipment in the conduct of any and all operations conducted in connection with the Project or the Property;

(b) Premises and operations including, without limitation, bodily injury, personal injury, death or property damage occurring upon, in or about the Property or the Improvements on any elevators or any escalators therein and on, in or about the adjoining sidewalks, streets and passageways;

(c) Environmental liability and indemnification of City therefore;

(d) Broad form property damage liability;

(e) Additional insured and primary insured endorsements protecting the City and its respective elected and appointed officials, officers, employees and agents;

(f) Personal injury endorsement.

C. Worker's Compensation Insurance. Worker's compensation insurance, in the amount required under then applicable state law, covering Owner's employees, if any, at work in or upon the Property or engaged in services or operations in connection with the Project or the Property. Owner shall require that any contract entered into by Owner with regard to work to be undertaken on the Property include a contractual undertaking by the contractor to provide worker's compensation insurance for its employees in compliance with applicable state law.

D. Course of Construction Insurance. Course of construction insurance in the same amount as required in Paragraph A above for property insurance, covering all construction activities on the Property.

E. General Insurance Provisions.

1. All policies of insurance provided for in this Exhibit shall be provided under valid and enforceable policies, in such forms and amounts as hereinbefore specified, issued by insurers licensed to do business in the State of California (or approved to do business in California and listed on the California Department of Insurance list of Eligible Surplus Lines Insurers or successor listing) and having a rating of A-VII or better in Best Insurance Guide or, if Best Insurance Guide is no longer in existence, a comparable rating from a comparable rating service. Prior to the issuance of building permits for the Project, and thereafter, not less than thirty (30) days prior to the expiration date of each policy furnished pursuant to this Exhibit B, Owner shall deliver to City certificates evidencing the insurance required to be carried by Owner under this Exhibit B. If requested by City, Owner shall deliver within ten (10) days following such request, certified, complete copies of the insurance policies required hereunder. Insurance policies to be provided hereunder shall meet the following requirements:

2. Each policy of insurance obtained pursuant to this Agreement, other than worker's compensation insurance, shall contain endorsements which provide:

   (a) A waiver by the insurer of the right of subrogation against City, Owner or any tenant of the Project for negligence of any such person,

   (b) A statement that the insurance shall not be invalidated should any insured waive in writing prior to the loss any or all right of recovery against any party for loss accruing to the property described in the insurance policy, and

   (c) A provision that no act or omission of Owner which would otherwise result in forfeiture or reduction of the insurance therein provided shall affect or limit the obligation of the insurance company to pay the amount of any loss sustained.

   (d) By endorsements, City, and its elected and appointed officials, officers, employees and agents shall be named as additional insured under the liability insurance required to be maintained by Owner hereunder. City shall be named as loss payee on the property insurance policies required to be maintained hereunder.

3. Each policy required hereunder shall include a Notice of Cancellation or Change in Coverage Endorsement which shall

provide that such policy shall not be cancelled or materially changed without at least thirty (30) days' prior written notice by registered or certified mail to City.

4. All insurance policies shall provide that there shall be no exclusion from coverage for cross liability among the listed insureds.

5. Any certificate of insurance applicable to course of construction insurance to be maintained shall be deposited with City prior to commencement of construction of any Improvements.

6. Each policy shall contain an endorsement that provides that the insurance applies separately to each insured that is seeking coverage or against whom a claim is made, except with respect to the limits of liability

7. Each policy shall be written as a primary policy not contributing with and not in excess of coverage that City may carry.

8. Each policy shall expressly provide that City shall not be required to give notice of accidents or claims and that City shall have no liability for premiums.

F. Blanket Policies. Any insurance provided for in this Exhibit B may be placed by a policy or policies of blanket insurance; provided, however, that such policy or policies provide that the amount of the total insurance allocated to the Property and the Project shall be such as to furnish protection the equivalent of separate policies in the amounts herein required, and provided further that in all other respects any such policy or policies shall comply with the other provisions of this Agreement

G. Waiver of Subrogation. To the extent permitted by law and the policies of insurance required to be maintained hereunder, and without affecting such insurance coverage, City and Owner each waive any right to recover against the other:

1. Damages for injury or death of persons,

2. Damage to property,

3. Damage to the Property or the Improvements or any part thereof, or

4. Claims arising by reason of any of the foregoing, to the extent that such damages and/or claims are covered (and only to the extent of

such coverage) by insurance actually carried by either City or Owner.

This provision is intended to restrict each party (as permitted by law) to recover against insurance carriers to the extent of such coverage, and waive fully, and for the benefit of each, any rights and/or claims which might give rise to a right of subrogation in any insurance carrier.

Compliance with Policy Requirements. Owner shall observe and comply with the requirements of all policies of public liability, fire and other policies of insurance at any time in force with respect to the Property, and Owner shall so perform and satisfy the requirements of the companies writing such policies that at all times companies of good standing shall be willing to write or to continue such insurance

5116844.1

EXHIBIT D-1

LEGAL DESCRIPTION OF AFFORDABLE HOUSING SITE PROPERTY

JUNE 24, 2022
JOB NO. 2674-010

EXHIBIT D-1
DESCRIPTION
FMC WILLOW AFFORDABLE HOUSING SITE

ALL THAT REAL PROPERTY SITUATE IN THE CITY OF NEWARK, COUNTY OF ALAMEDA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING A PORTION OF PARCEL 1 AND PARCEL 2, AS SAID PARCELS ARE SHOWN AND SO DESIGNATED ON PARCEL MAP 11072, RECORDED DECEMBER 11, 2020, AND FILED IN BOOK 348 OF PARCEL MAPS, AT PAGE 32, IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

CONSISTING OF TWO (2) DEDICATION AREAS, MORE PARTICULARLY DESCRIBED AS:

AREA 1

COMMENCING AT THE SOUTHEAST CORNER OF SAID PARCEL 2;

THENCE, FROM SAID POINT OF COMMENCEMENT, ALONG THE SOUTHERN LINE OF SAID PARCEL 2, SOUTH 80°41'05" WEST, 3.07 FEET TO THE **POINT OF BEGINNING** FOR THIS DESCRIPTION;

THENCE, FROM SAID POINT OF BEGINNING ALONG THE SOUTHERN LINE OF SAID PARCEL 2, SOUTH 80°41'05" WEST, 449.17 FEET;

THENCE, LEAVING SAID SOUTHERN LINE AND ENTERING SAID PARCEL 1 AND PARCEL 2, THE FOLLOWING TEN (10) COURSES:

1. NORTH 21°43'54" WEST, 111.54 FEET;
2. THENCE NORTH 68°14'57" EAST 21.44 FEET;
3. THENCE SOUTH 89°39'47" EAST 36.08 FEET;
4. THENCE NORTH 80°41'05" EAST 131.36 FEET;
5. THENCE NORTH 09°18'55" WEST 1.50 FEET;
6. THENCE NORTH 80°41'05" WEST 118.20 FEET;
7. THENCE ALONG THE ARC OF A TANGENT 266.50 FOOT RADIUS CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 12°26'08", AN ARC DISTANCE OF 57.84 FEET;
8. THENCE, NORTH 68°14'57" EAST 66.16 FEET;
9. THENCE, ALONG THE ARC OF A TANGENT 25.00 FOOT RADIUS CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 39°43'15", AN ARC DISTANCE OF 17.33 FEET;

F:\2674-000\2674-010\ACAD\SURVEY\LEGALS\LG-10_D1_AFFORDABLE PARCEL.DOCX

10. THENCE, SOUTH 21°49'42" EAST 130.40 FEET, TO SAID **POINT OF BEGINNING.**

CONTAINING 1.15 ACRES OF LAND, MORE OR LESS

AREA 2

COMMENCING AT THE NORTHEAST CORNER OF SAID PARCEL 2;

THENCE, FROM SAID POINT OF COMMENCEMENT, ALONG THE NORTHERN LINE OF SAID PARCEL 2, SOUTH 68°14'57" WEST, 180.93 FEET TO THE **POINT OF BEGINNING** FOR THIS DESCRIPTION;

THENCE, FROM SAID POINT OF BEGINNING, LEAVING SAID NORTHERN LINE AND ENTERING SAID PARCEL 1 AND PARCEL 2, THE FOLLOWING FOUR (4) COURSES:

1. SOUTH 20°22'20" EAST, 97.03 FEET;
2. THENCE, SOUTH 68°26'15" WEST, 219.96 FEET;
3. THENCE, NORTH 20°31'43" WEST, 96.30 FEET TO SAID NORTHERN LINE OF SAID PARCEL 2;
4. THENCE, ALONG SAID NORTHERN LINE OF SAID PARCEL 2, NORTH 68°14'57" EAST, 220.24 FEET, TO SAID **POINT OF BEGINNING.**

CONTAINING 0.49 ACRES OF LAND, MORE OR LESS

END DESCRIPTION

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EXHIBIT D-2

DEPICTION OF AFFORDABLE HOUSING SITE PROPERTY

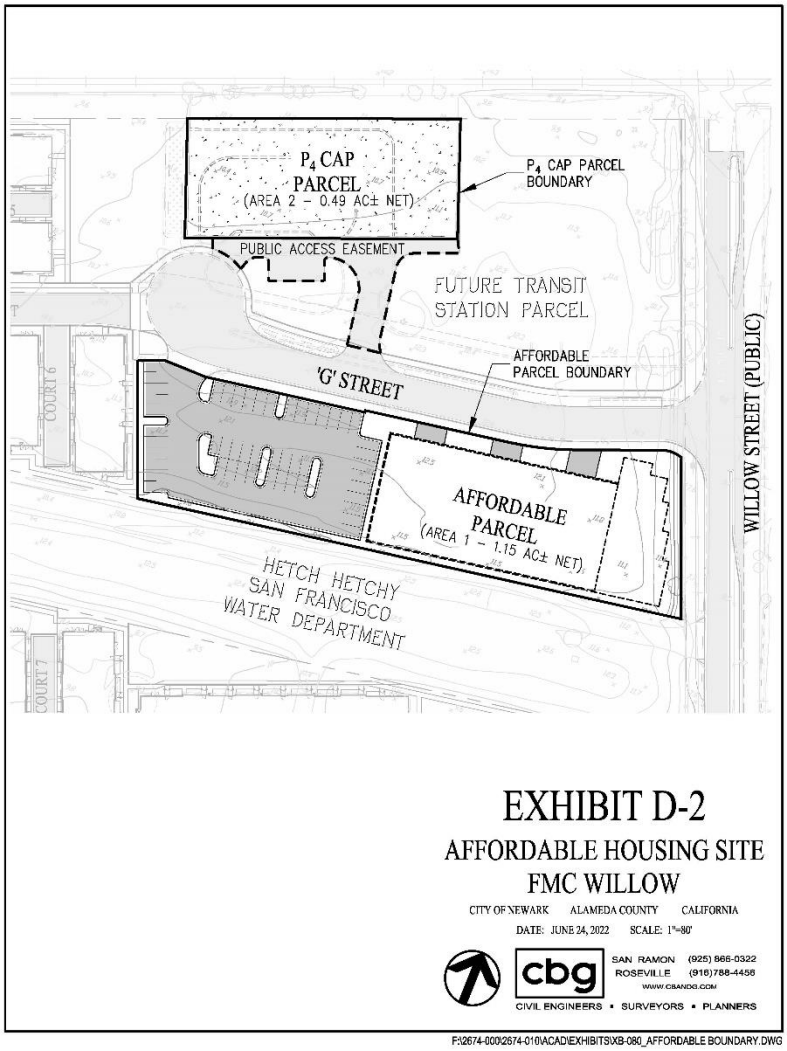


EXHIBIT E

FORM OF RESTRICTIVE COVENANT

[Attached]

RECORDING REQUESTED BY
AND WHEN RECORDED MAIL TO:

City of Newark
City Clerk
37101 Newark Blvd
Newark, CA 94560

No fee due per Gov. Code § 6103

_____
City Clerk

Assessor's Parcel Nos._____

(SPACE ABOVE RESERVED FOR RECORDER'S USE)

AGREEMENT FOR RESTRICTION ON USE OF REAL PROPERTY FOR DEVELOPMENT OF AFFORDABLE HOUSING

This AGREEMENT FOR RESTRICTION ON USE OF REAL PROPERTY FOR DEVELOPMENT OF AFFORDABLE HOUSING ("AGREEMENT") is made and entered into by and between The Willow Project Owner, LLC, a Delaware limited liability company, ("Developer"), and the City of Newark ("City"), a California municipal corporation, with reference to the following:

RECITALS

A. Developer is the owner of record of the real property described on Exhibit "A-1" and depicted on Exhibit "A-2" (the "Affordable Housing Site") located in the City of Newark, County of Alameda.

B. The Property will be developed with at least ninety (90) Affordable Housing Units, as described more fully in that certain Affordable Housing Obligation Satisfaction Agreement for the Willow and Harbor Pointe Projects, by and between the City of Newark, a California municipal corporation, and The Willow Project Owner, LLC a Delaware limited liability company dated _____, 2022 (the "Satisfaction Agreement").

C. This Agreement is intended to satisfy the requirements of the Satisfaction Agreement to encumber the Affordable Housing Site with the obligation to provide a minimum of nine (90) Affordable Dwelling Units.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises, covenants and agreements set forth herein, Developer and the City agree as follows:

1. The Affordable Housing Site shall be restricted to the development of at least ninety (90) Affordable Dwelling Units to satisfy the Affordable Housing Obligation (both as defined in the Satisfaction Agreement). Nothing herein is intended to restrict the ability to construct other facilities normally associated with residential housing (for example, common areas, recreational facilities) in conjunction with the development of the Affordable Dwelling Units. Approval of the City of the development of the Affordable Housing Site will be conclusive evidence that the proposed development of the Affordable Housing Site is consistent with this Agreement.

2. In the event the Affordable Dwelling Units are not completed within the time provided in Section 5 of the Satisfaction Agreement (or any extension thereof), then pursuant to Section 7, upon written demand of the City, Developer shall convey to the City the Affordable Housing Site free of any monetary liens, encumbrances or other charges (except as provided in 6.2 of the Satisfaction Agreement and other than a lien for current property taxes).

3. The terms and conditions of this Agreement shall constitute a covenant running with and binding the land in accordance with the provisions of California Civil Code section 1468. Accordingly, the Affordable Housing Site shall be held, sold, conveyed, mortgaged, encumbered, leased, rented, used, occupied and improved subject to this Agreement, which shall run with the Affordable Housing Site, and shall be binding on all parties having any right, title or fee interest in the Affordable Housing Site, and their heirs, successors and assigns. Upon the sale of the Affordable Housing Site to a new owner and recordation of the deed conveying the fee interest in the Affordable Housing Site, selling owner (and in the case of subsequent owners, the owner then selling the Affordable Housing Site) shall be automatically released and discharged from any and all obligations under this Agreement, which obligations shall be assumed by the new owner, who shall be deemed "Developer" hereunder.

4. This Agreement and its validity, construction and effect shall be governed by the laws of the State of California applicable to contracts wholly to be performed therein. This Agreement shall not be deemed to give any right or remedy to any third party whatsoever.

5. This Agreement shall not be amended in any manner or terminated without the prior written approval of all parties nor without the recordation of any such approval. The City agrees to execute and record a termination of this Agreement in its entirety upon recordation of an Affordable Housing Declaration (as defined in the Satisfaction Agreement).

IN WITNESS WHEREOF, Developer and the City have executed this Agreement Amendment as of the dates set forth below.

DEVELOPER

THE WILLOW PROJECT OWNER, LLC,
a Delaware limited liability company

By: KPMW Integral, LLC,
a California limited liability company,
Its Managing Member

By:_____
Name:_____
Title:_____

[SIGNATURES CONTINUE ON NEXT PAGE]

CITY

CITY OF NEWARK,
a California municipal corporation

By:_____
Name:_____
Title:_____

Attest:

_____
City Clerk

Approved as to form:

_____
Kris Kokotaylo
City Attorney

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)
Notary Public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)
Notary Public, personally appeared _____who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)
Notary Public, personally appeared _____ who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of _____)

On _____, before me, _____,
(insert name and title of the officer)
Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____ (Seal)

EXHIBIT A-1

LEGAL DESCRIPTION OF AFFORDABLE HOUSING SITE

JUNE 24, 2022
JOB NO. 2674-010

EXHIBIT A-1
DESCRIPTION
FMC WILLOW AFFORDABLE HOUSING SITE

ALL THAT REAL PROPERTY SITUATE IN THE CITY OF NEWARK, COUNTY OF ALAMEDA, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:

BEING A PORTION OF PARCEL 1 AND PARCEL 2, AS SAID PARCELS ARE SHOWN AND SO DESIGNATED ON PARCEL MAP 11072, RECORDED DECEMBER 11, 2020, AND FILED IN BOOK 348 OF PARCEL MAPS, AT PAGE 32, IN THE OFFICE OF THE COUNTY RECORDER OF ALAMEDA COUNTY AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

CONSISTING OF TWO (2) DEDICATION AREAS, MORE PARTICULARLY DESCRIBED AS:

AREA 1

COMMENCING AT THE SOUTHEAST CORNER OF SAID PARCEL 2;

THENCE, FROM SAID POINT OF COMMENCEMENT, ALONG THE SOUTHERN LINE OF SAID PARCEL 2, SOUTH 80°41'05" WEST, 3.07 FEET TO THE **POINT OF BEGINNING** FOR THIS DESCRIPTION;

THENCE, FROM SAID POINT OF BEGINNING ALONG THE SOUTHERN LINE OF SAID PARCEL 2, SOUTH 80°41'05" WEST, 449.17 FEET;

THENCE, LEAVING SAID SOUTHERN LINE AND ENTERING SAID PARCEL 1 AND PARCEL 2, THE FOLLOWING TEN (10) COURSES:

1. NORTH 21°43'54" WEST, 111.54 FEET;
2. THENCE NORTH 68°14'57" EAST 21.44 FEET;
3. THENCE SOUTH 89°39'47" EAST 36.08 FEET;
4. THENCE NORTH 80°41'05" EAST 131.36 FEET;
5. THENCE NORTH 09°18'55" WEST 1.50 FEET;
6. THENCE NORTH 80°41'05" WEST 118.20 FEET;
7. THENCE ALONG THE ARC OF A TANGENT 266.50 FOOT RADIUS CURVE TO THE LEFT, THROUGH A CENTRAL ANGLE OF 12°26'08", AN ARC DISTANCE OF 57.84 FEET;
8. THENCE, NORTH 68°14'57" EAST 66.16 FEET;
9. THENCE, ALONG THE ARC OF A TANGENT 25.00 FOOT RADIUS CURVE TO THE RIGHT, THROUGH A CENTRAL ANGLE OF 39°43'15", AN ARC DISTANCE OF 17.33 FEET;

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10. THENCE, SOUTH 21°49'42" EAST 130.40 FEET, TO SAID **POINT OF BEGINNING**.

CONTAINING 1.15 ACRES OF LAND, MORE OR LESS

AREA 2

COMMENCING AT THE NORTHEAST CORNER OF SAID PARCEL 2;

THENCE, FROM SAID POINT OF COMMENCEMENT, ALONG THE NORTHERN LINE OF SAID PARCEL 2, SOUTH 68°14'57" WEST, 180.93 FEET TO THE **POINT OF BEGINNING** FOR THIS DESCRIPTION;

THENCE, FROM SAID POINT OF BEGINNING, LEAVING SAID NORTHERN LINE AND ENTERING SAID PARCEL 1 AND PARCEL 2, THE FOLLOWING FOUR (4) COURSES:

1. SOUTH 20°22'20" EAST, 97.03 FEET;
2. THENCE, SOUTH 68°26'15" WEST, 219.96 FEET;
3. THENCE, NORTH 20°31'43" WEST, 96.30 FEET TO SAID NORTHERN LINE OF SAID PARCEL 2;
4. THENCE, ALONG SAID NORTHERN LINE OF SAID PARCEL 2, NORTH 68°14'57" EAST, 220.24 FEET, TO SAID **POINT OF BEGINNING**.

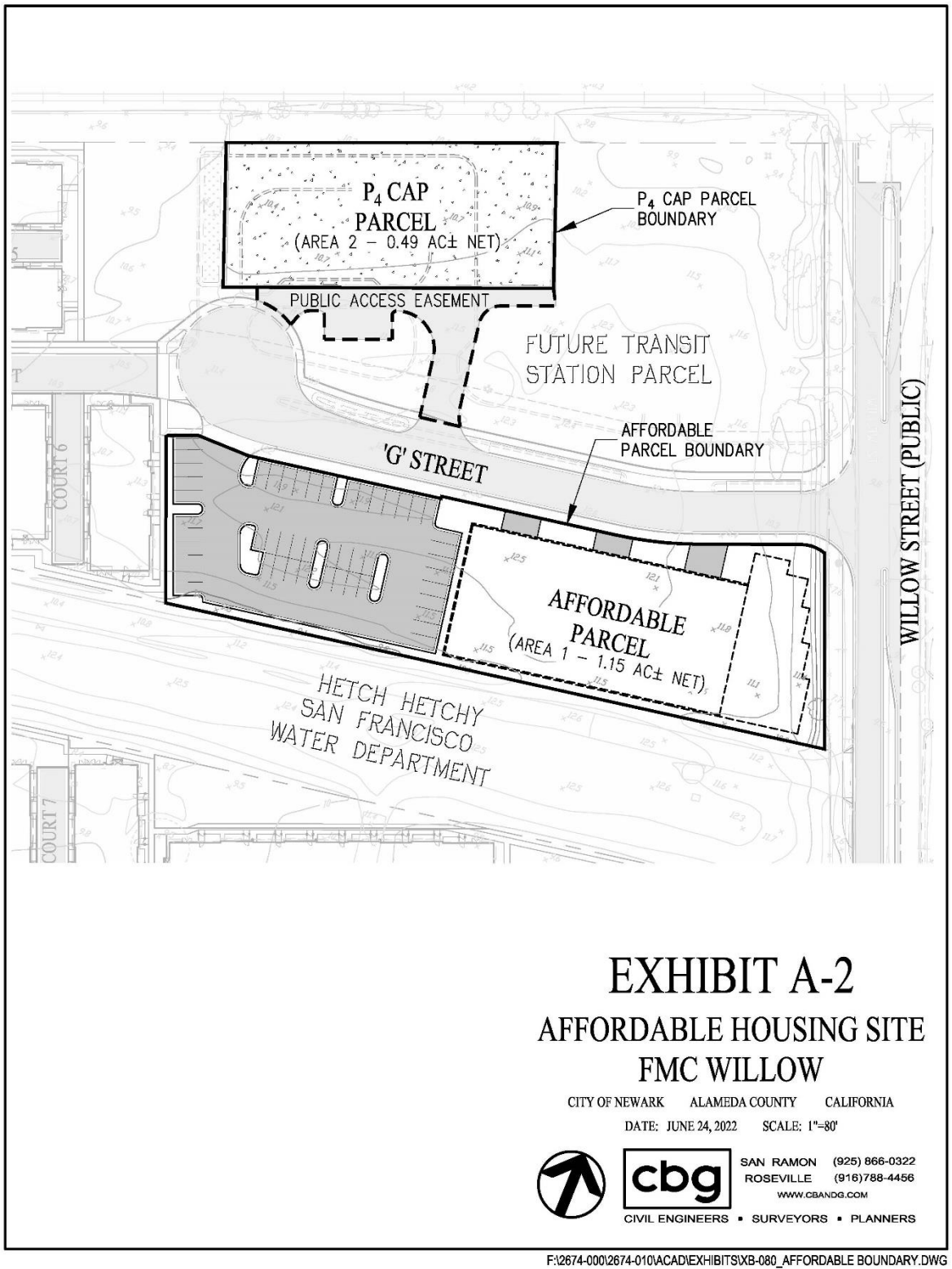
CONTAINING 0.49 ACRES OF LAND, MORE OR LESS

END DESCRIPTION

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EXHIBIT A-2

DEPICTION OF AFFORDABLE HOUSING SITE



I. California Environmental Quality Act Determination (Cal. Public Resources Code Section 21000, et. seq.)

The Dumbarton TOD Specific Plan was adopted after certification of a full environmental impact report.

The City of Newark (City) certified a Program Environmental Impact Report (PEIR) for the Bayside Newark Transit Oriented Development (TOD) Specific Plan (Specific Plan), formerly known as the Dumbarton TOD Specific Plan (State Clearinghouse No. 2010042012, July 2011). The City required preparation of an Initial Study (IS) to determine whether those changes to the FMC Willow and Grand Park project would result in any new or more substantial impacts from those identified in the prior adopted 2011 PEIR. Generally, the project's increased residential density replaces existing commercial and office. The IS concludes, based upon substantial evidence, that the proposed FMC Willow and Grand Park project is similar to the project evaluated in the adopted 2011 PEIR and would not cause any new or more severe impacts not previously addressed. Similar to the approved project, the proposed project involves the construction of a commercial/mixed-use and residential development, with a future transit station and recreational open space. As supported in the analysis contained in the accompanying IS, there are no substantial changes proposed in the FMC Willow and Grand Park project which would result in any new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the 2011 PEIR. There is no new information of substantial importance which was not known for the 2011 PEIR, and no new mitigation measures are necessitated by new impacts. Therefore, under CEQA Guidelines 15162 and 15164, no further environmental analysis is required as none of the circumstances in Section 15162 exist and the City finds that an addendum to the 2011 PEIR is appropriate for the project. The IS and addendum (together the "IS/Addendum") is incorporated into these findings by reference.

II. General Plan Amendment

Pursuant to Newark Municipal Code Chapter 17.38, the City finds as follows:

A. *Reasons for the recommendation* - The General Plan Amendment is required to allow the proposed change in uses permitted on the 22.1 acre Project Site, and ensure consistency with the concurrently approved Bayside Newark TOD Specific Plan ("Specific Plan") Amendment and Rezoning, by amending the General Plan land use map to designate the Project Site with Medium Density Residential, Commercial Mixed Use, Public Institutional, and Parks and Recreation Facilities land use designations, a change from the existing Community Commercial, High Density Residential, Parks and Recreational Facilities, and Public Institutional designations.

B. *Findings related to supporting the recommendation-*

1. The request for the General Plan Amendment is consistent with the requirements and procedures set forth in the General Plan and Specific Plan;

2. The proposed Project (specifically including the General Plan Amendment, Specific Plan Amendment, Rezoning, Design Review, Minor Use Permit, Vesting Tentative Tract Map No.

8559, and Affordable Housing-Alternative Means of Compliance to Payment of Housing Impact Fee) is consistent with the General Plan, including the following General Plan policies:

Policy LU-1.1 Balance of Uses. Maintain a reasonable balance of land uses in the city so that residents can live close to where they work and satisfy their shopping, educational, personal, health, entertainment, and recreational needs close to home. The Project would result in the development of market rate and affordable housing adjacent to retail and recreational uses, as well as a future transit station.

Policy LU-1.2 Growth Focus Areas. Achieve a future growth pattern which includes new neighborhoods on vacant land along the southern and western edges of the city, and infill development in transit-served areas such as Old Town and the Greater NewPark Mall Area. Zoning and development review decisions should recognize these areas as the priority locations for growth and change over the next 20 years. The Project would redevelop vacant, blighted former industrial sites on the western edge of the City with 279 market rate residential units, 90 affordable housing units, retail uses and parks/recreational uses.

Policy LU-1.4 Coordinating Land Use and Transportation Decisions. Coordinate land use and development decisions with the capacity of the transportation system and plans for future transportation improvements. The Project would develop residential and retail uses adjacent to, and reserve property for, a future transit station. As part of the Project, the applicant is dedicating the property for the future transit station.

Policy LU-1.6 Strengthening the Retail Base. Diversify the retail base of the city to create jobs, generate tax revenue to support City services, and enable residents and workers to find the goods and services they need without leaving Newark. The Project would develop retail uses on an underutilized, former industrial vacant site, increasing tax revenue.

Policy LU-1.8 Housing Opportunity Sites. Ensure that adequate sites are provided for the private and non-profit sectors to develop housing for seniors, persons with disabilities, and lower income households. Such housing should be well designed and managed, and located in a manner that is compatible with existing uses and neighborhood character. The Project would develop 90 high quality affordable housing units, which will be professionally managed along with the 279 market rate townhome units proposed by the Project, as a 370-unit mixed use community.

Policy LU-1.9 Park and Recreation Expansion. Expand park and recreational lands and facilities to keep pace with population growth and support the leisure time needs of Newark residents. The Project would include a five-acre community park (Grand Park), as well as a 1,485 square foot community building.

Policy LU-1.10 Vacant and Underutilized Sites. Encourage the development of Newark's remaining vacant and underutilized sites for their highest and best use, consistent with the designations shown on the General Plan Diagram. Future growth in the city should generally be directed to the areas identified in this General Plan. The Project would redevelop vacant, blighted former industrial sites on the western edge of the City with 279 market rate residential units, 90 affordable housing units, retail uses and parks/recreational uses.

Policy LU-1.15 Mixed-Use. Provide opportunities for development combining residential and commercial uses (e.g. "mixed-use" development) in areas where the impacts of one land use on the other and the impacts on nearby neighborhoods can be sufficiently mitigated. The Project would redevelop vacant, blighted former industrial sites with a mixed used residential community that incorporates commercial/retail uses as part of the Project.

Policy LU-2.3 High-Quality Development. Maintain standards for medium-density, high-density, and mixed-use development that ensure high quality development and adequate buffering and screening from nearby lower density uses. The Project would comply with the Specific Plan's design guidelines and all the other standards imposed by the Design Review to ensure high quality development and adequate buffering, as applicable. The project will be buffered to the west by a 5-acre grand park. The bay trail corridor along Enterprise Drive will include a 7-foot landscape strip with tree planting and a 12-foot concrete pedestrian trail. Along the north side of the project is the Sam Trans right of way where a soundwall will be constructed along the property line. The east side of the project adjacent to Willow Street will include the future transit station site and the mixed-use parcel.

Policy LU-2.7 Design Guidelines. Maintain design guidelines and a design review process that applies to building and site design throughout the city. The Project would comply with the Bayside Newark Specific Plan's design guidelines and all the other standards imposed by the City's Design Review approval. Architecture will feature high quality materials such as stone/brick veneer, lap siding metal railings, awnings, and metal-look roofing, and fiber cement finishes. Landscaping will feature a blend of low maintenance, drought tolerant, and California native trees, shrubs, grasses and perennials

Policy LU-2.8 Relating Density to Transit Service. Allow higher residential densities in areas with more frequent and reliable public transit service, and ensure that public transit services are expanded in areas where growth is projected. The Project would develop higher density residential in the area surrounding the future transit station specifically, 79.1 du/ac at the commercial mixed/use site and 21.4 du/ac for the residential area and would dedicate a 1.8 net acre site to the City to be used for expanded transit services.

Policy LU-4.3 Urban Centers. Create locations in Newark which are more urban and pedestrian-oriented in character than they are today. Such areas include the future Dumbarton Transit Oriented Development and Old Town. These areas should be transformed over time into mixed-use centers with retail, office, civic, and higher density housing uses. The Project would redevelop vacant, blighted former industrial sites with a mixed used residential community that incorporates commercial/retail uses as part of the Project, high density residential condominiums, affordable for rent units, a bay trail compliant corridor along Enterprise Drive and Willow Street, as well as a five-acre park for use by the Project's residents and a future transit station. The project would incorporate sidewalk connections throughout both the project's northern and southern sites allowing for pedestrians to move freely throughout the area.

Policy LU-6.1 Dumbarton TOD Land Uses. Plan for the following activities around the intersection of Willow Street and the proposed Dumbarton Rail Service: (1) a future transit station serving the region as well as neighboring residents; (2) a neighborhood center consisting of retail, grocery, visitor-serving, and higher-density residential uses; (3) up to 2,500 housing units with a

wide range of unit types and affordability levels; (4) necessary infrastructure to support the development; (5) contribution toward an overpass on Central Avenue over the Union Pacific railroad tracks, and (6) a network of open space and parks, including a bayside trail. The Project implements this Policy by dedicating a net 1.8 acre property for a future transit station and developing 3,600 sf of retail and 370 higher-density residential units, including 90 affordable housing units (and one manager's unit), a five-acre park and the necessary infrastructure to support the Project.

Policy LU-6.2 Dumbarton TOD Design Guidelines. Apply design guidelines to future development at Dumbarton TOD which support the area's development as a "village" comprised of traditional city blocks, vernacular architectural styles, and a mix of housing types. The Project would comply with the Specific Plan's design guidelines, and provide higher density residential housing products, including 90 affordable units, to allow for a variety of housing types. The contemporary architectural styles of the 3 residential products (Split, Towns, Stack) would use colors and materials (light color palette, stucco finishes, and lap siding) similar to surrounding residential developments, while incorporating contemporary low-slope roofs to give the development a subtle unique character to differentiate and add visual interest. With the adjacent location of the future transit hub, linking its future residents to nearby corporate campuses, the product styles would help blend the bold contemporary styles of the campuses with the traditional styles of neighboring residential communities. With the nearby 4-story apartment complex to the south of the project site, the 5-story mixed use podium building being of similar height and mass, would reflect a similar and complimentary style with the use of scored stucco, similar window awnings, and parapet walls with roofed tower elements, as well as a light color palette

Policy LU-6.3 Dumbarton Rail. Advocate for construction of the Dumbarton Rail project connecting Newark to BART and the West Bay, with a station at Willow Street in Newark. As an interim measure until rail service is provided, advocate for high quality, rapid bus service connecting the Dumbarton TOD station area to BART, VTA, and the West Bay, to ensure that new development in this area can meet the TOD goals for the project. As part of the Project, the applicant would dedicate property for the future development of this station. Staff will continue to work with SamTrans to eventually build a transit station at the project site to help the public transportation connection between this site and other services.

Policy LU-6.4 Minimizing Dumbarton TOD Impacts. Minimize the impacts of the Dumbarton TOD on the natural environment by incorporating native plant species, reducing herbicide and pesticide use, using environmentally friendly construction and waste disposal techniques, and managing stormwater runoff to avoid water quality impacts to nearby wetlands and San Francisco Bay. The EIR imposes mitigation measures on the Project that will ensure it is consistent with this Policy. Dumbarton TOD impacts will be mitigated through the use of plant species that specifically aid in phytoremediation which will naturally remove runoff pollutants and salts before runoff reaches sewer systems, wetlands, and adjacent water bodies. Bioretention basins are located in the majority of planter beds throughout the site which will add an additional layer of pollutant filtration. Trees with expansive canopies will be planted throughout the development and will intercept rainwater before touching the ground, thus adding another layer of water treatment.

Policy LU-6.5 Dumbarton TOD Landscaping and Streetscape. Use landscaping and tree planting to enhance the character of the Dumbarton TOD neighborhoods, define the community's edges, provide landmarks and focal points, make streets more pleasant for walking, and create a stronger sense of place. The landscape should reflect climate and soil conditions, as well as the desire to conserve water and create visual appeal The Project would include landscaping consistent with this Policy, in compliance with the Specific Plan design guidelines and as part of the Project's Design Review approval. The landscape would enhance the character of Dumbarton TOD neighborhoods through the use of site specific materiality, planting design, and park design. Enhanced brick and stucco veneers would be utilized for seat walls and retaining walls to visually tie in the landscape built elements with the brick and stucco materials that will be used on the TOD neighborhood architecture. Custom enhanced steel architecture stoop railings and patio fences would match the decorative, linear architectural balcony railings for a heightened sense of identity. These same enhanced steel details will carry through to the landscape park overheads. The planting design would feature wispy, flowing native grasses to capture the native wetland feel of the adjacent bay. Flowering shrubs at pedestrian paseo entry points would add a natural highlight to neighborhood entrances and enhance wayfinding.

Policy LU-6.6 Dumbarton TOD Lighting. Use lighting and illumination which compliments architectural styles, reduces glare and over-lighting impacts, ensures pedestrian safety, and highlights special design elements within the community. The Project would include landscaping consistent with this Policy, in compliance with the Specific Plan design guidelines and as part of the Project's Design Review approval. Modern yet timeless street pole lights, pedestrian scale pole lights, and bollard lights would be specified to match the sconce lighting that will be featured on the community architecture. All pole and bollard lights would feature light fixture covers that would prevent vertical light pollution and also direct light throw towards pedestrian circulation areas and away from private residential units. All pedestrian circulation lighting would be strategically distributed to maintain uniform light coverage based on photometric plans that would be prepared by a certified lighting designer. This uniform lighting design would enhance safety and promote clear pedestrian circulation.

Policy E D-2.4 New Retail Districts. Create additional shopping opportunities in newly developing neighborhoods, such as Dumbarton TOD, to meet the needs of new residents and workers, and reduce the loss of retail dollars to nearby communities. New commercial districts should be designed as integral parts of the neighborhoods they serve, so that patrons can easily walk or bicycle from home or work to shopping. The Project is a mixed use residential project that would incorporate retail uses. The mixed use building would contain 3,600 square feet of ground floor retail space fronting along Willow Ave. The high floorplate façade for the retail space would serve as a grand entry to the project. Residential affordable units would be located above the retail space to provide proper massing and an urban feel. The current plan shows one 1,000 square foot retail space that could be used for a small coffee shop or café plus a 2,600 sf space for another neighborhood serving use such as a restaurant or deli. The retail frontage would also include an enclosed, secured elevator lobby for the affordable housing units.

The Project is consistent with the General Plan's Housing Element because it would increase overall housing stock in the City by 370 total units, including 90 affordable units, and would assist in addressing both the regional and statewide housing crisis.

III. Specific Plan Amendment

A. *The proposed amendments to the Bayside Newark TOD Specific Plan are consistent with the Newark General Plan.* The amendments to the Specific Plan would include re-designation of the Project Site's land use designations/zoning so that the current office uses are replaced with 48 residential units (collectively "Specific Plan Amendment"). These changes are provided to enable implementation of the vision for buildout of the Specific Plan area and made in light of the fact that third part experts have determined that the development of office uses are not feasible on the Project Site. The Project would also be consistent with the overall development capacity and intensity for the Specific Plan area as identified in the General Plan and assumed in the 2013 General Plan Environmental Impact Report ("EIR") and 2011 PEIR. The Specific Plan Amendment would not result in increased development capacity or a change in the intensity of development or site improvements already planned or anticipated in the General Plan and Specific Plan. Nor would the amendments directly result in development types that were not already assumed and evaluated in the General Plan EIR and Specific Plan EIR. Specifically, the Specific Plan planned for the development of a total of 2,500 dwelling and 35,000 square feet of retail, and as of February 2022, a total of 2,171 dwelling units and 3,600 square feet of retail have been approved or are pending approval in the Specific Plan area, leaving plenty of capacity for the Project without resulting in any new or increased impacts on the environment, as concluded in the IS/Addendum to the PEIR prepared for the Project.

IV. Zoning Map Amendment

Pursuant to Newark Municipal Code section 17.39.080, the City finds as follows:

A. The amendment is consistent with the General Plan. The City's zoning map would be amended to change the zoning of the Project Site from Business and Technology Park and Park to Medium Density Residential - Form Based Code, Commercial/Mixed Use - Form Based Code, Transit Station, Public Facilities, and Park. These zones are consistent with the General Plan land use designations for the Project Site, as amended – Medium Density Residential, Commercial Mixed Use, Public Institutional, and Parks and Recreation Facilities. The new zoning designations specifically, and the Project generally, would be consistent with the applicable polices of the General Plan, including but not necessarily limited to the Policies specifically listed in section II above. Therefore, the Zoning Map Amendment would be consistent with the General Plan.

B. *Any change in district boundaries is necessary to achieve the balance of land uses desired by the city, consistent with the general plan, and to increase the inventory of land within a given zoning district.* The Zoning Map Amendment would reflect the changes to land use designations eliminate infeasible office uses and replace them with housing, which is necessary to achieve the balance of land uses desired by the City, and consistent with the General Plan as set forth above. The zoning change would allow underutilized, vacant and blighted former industrial land to be developed consistent with the vision of the General Plan and Specific Plan, and would result in the dedication of property for the City's desired transit station.

C. *The amendment will promote the growth of the city in an orderly manner and to promote and protect the public health, safety, peace, comfort, and general welfare.* The Zoning Map

Amendment and Specific Plan, as amended, would guide the orderly development of the Project in a manner to promote and protect the public health, safety, peace, comfort and general welfare, as required through conformance of applicable policies and regulations of the Specific Plan in addition to the City's zoning requirements. The Zoning Map Amendment would ensure consistency with the Specific Plan and General Plan and would result in orderly and planned-for growth that promotes the General Plan policies described in section II above.

V. Design Review

Pursuant to Newark Municipal Code section 17.34.060, the City finds as follows:

A. *The overall design of the project including its scale, massing, site plan, exterior design, and landscaping will enhance the appearance and features of the project site and surrounding natural and built environment.* The Project would redevelop and revitalize a largely vacant and blighted former industrial site with modern, aesthetically pleasing market rate and affordable residential units, commercial retail uses, a five-acre park, and other landscaping improvements, including trees and greenspaces and other aesthetic improvements such as open spaces on the property dedicated to the City for a future transit station. The massing of the residential units and other development would be appropriate for the area and would enhance the appearance and features of the project site and surrounding natural and built environment.

B. *The project design is appropriate to the function of the project and will provide an attractive and comfortable environment for occupants, visitors, and the general community.* The Project would redevelop and revitalize a largely vacant and blighted former industrial site with modern, aesthetically pleasing market rate and affordable residential units, commercial retail uses, a five-acre park, and other landscaping improvements, including trees and greenspaces and other aesthetic improvements such as open spaces on the property dedicated to the City for a future transit station. The Project design and connectivity would encourage pedestrians, including Project residents and visitors, to walk to the retail uses, park, and future transit station.

C. *Project details, materials, signage and landscaping, are internally consistent, fully integrated with one another, and used in a manner that is visually consistent with the proposed architectural design.* The high-quality exterior building materials, such as brick and stone, are integral to the architectural design per applicable Specific Plan Design Guidelines. The street level storefronts would help create a pleasant pedestrian experience, as well the features of the park and future transit station. Landscape seat walls and retaining walls would feature enhanced brick and stucco veneers with wall caps that would match the community architectural brick and veneer materials. These same brick and stucco materials would carry through to the two entry monument signs to further promote a sense of unique community identity. Custom metal details with linear elements would be featured on the park overheads, patio fences, and architectural unit stoop railings to tie in the custom linear metal balcony railings on the architecture. The project details would be internally consistent, fully integrated with one another, and used in a manner that is visually consistent with the proposed design.

D. *The design of streetscapes, including street trees, lighting, and pedestrian furniture, is consistent with the intended character of the area.* Consistent with the Specific Plan design guidelines, the Project would include these features, consistent with the intended character of the

area, including landscaped walkways and streets, as well as trees. Modern yet timeless pedestrian furniture and light fixtures would be specified to reflect the modern forms of the architecture and the warm, timeless brick and stucco architecture facades. Street trees would feature strong structural forms for year-round interest and vibrant reddish-orange fall color which will create a noteworthy identity for the community. The Bay Trail would run along the perimeter of the community and will be lined with wide parkways and lush native planting which will encourage pedestrian use and interaction surrounding the community.

E. *Parking areas are designed and developed to buffer surrounding land uses; compliment pedestrian-oriented development; enhance the environmental quality of the site, including minimizing stormwater run-off and the heat-island effect; and achieve a safe, efficient, and harmonious development.* The Project would redevelop and revitalize a largely vacant and blighted former industrial site with modern, aesthetically pleasing market rate and affordable residential units, commercial retail uses, a five-acre park, and other landscaping improvements, including trees and greenspaces and other aesthetic improvements such as open spaces on the property dedicated to the City for a future transit station. This would enhance the environmental quality of the site.

F. *Lighting and lighting fixtures are designed to complement buildings, be of appropriate scale, provide adequate light over walkways and parking areas to create a sense of pedestrian safety, and avoid creating glare.* The Project's lighting would be designed in conformance with the Specific Plan's lighting design guidelines, which ensure the lighting will implement all of these goals. See response to LU-6.6 describing the character, specification, and design of landscape lighting.

G. *Landscaping is designed to be compatible with and enhance the architectural character and features of the buildings on site, and help relate the building to the surrounding landscape.* The landscaping design would incorporate "Bay Friendly" landscape practices including native, non-invasive and drought tolerant trees and shrubs to complement the buildings while providing shade and visual interest along the pedestrian path. The sidewalk landscaping would also designed as part of the stormwater management system in compliance with provision C.3 of the Municipal Regional Stormwater NPDES Permit issued by the California Regional Water Quality Control Board, which governs stormwater discharge for new development projects. Finally, the landscaping design would be consistent with and subject to the Specific Plan's design guidelines.

VI. Minor Use Permit

Pursuant to Newark Municipal Code sections 17.35.060 and 17.23.050, the City finds as follows:

A. *The proposed use is allowed within the applicable zoning district and complies with all other applicable provisions of this Ordinance and all other titles of the Municipal Code.* The only aspect of the Project that would require a Minor Use Permit is the request to have a reduced number of parking spaces due to the proximity of the Project's residential uses to a transit station, pursuant to Newark Municipal Code section 17.23.050(A). The Project's uses are permitted in the Project's zoning, as amended, and the Project would qualify for reduced parking by meeting the requirements set forth in Newark Municipal Code section 17.23.050.

B. *The proposed use is consistent with the General Plan and the Specific Plan.* The uses of the Project would be consistent with the General Plan and the Specific Plan as amended, as set forth in detail in the findings above.

C. *The proposed use will not be adverse to the public health, safety, or general welfare of the community, nor detrimental to surrounding properties or improvements.* The Project, and specifically the reduced parking as a result of adjacent transit, would not be adverse the public health, safety, or general welfare of the community, nor detrimental to surrounding properties or improvements, and instead would reduce vehicle miles traveled and promote the use of transit instead of passenger vehicles, and pedestrian travel. The Project would further be consistent with the General Plan polices described in section II above, which are intended to promote the public health, safety, and welfare of the community.

D. *Tax revenue generated by the development will exceed the City's cost of the service demand as a result of the development or a compelling community benefit will be provided.* The Project would redevelop vacant and blighted former industrial property with residential and retail uses, thereby significantly increasing the City's property tax base by increasing the value of the property, as well as creating sales tax.

E. *The proposed use complies with any design or development standards applicable to the zoning district or the use in question unless waived or modified pursuant to the provisions of this [Zoning] Ordinance.* The uses of the Project would comply with all applicable design and development standards and are allowed under the Specific Plan and Zoning Ordinance.

F. *The design, location, size, and operating characteristics of the proposed activity are compatible with the existing and reasonably foreseeable future land uses in the vicinity.* The Project would comply with all applicable design and development standards. Further, the Project would qualify for reduced parking by meeting the requirements set forth in Newark Municipal Code section 17.23.050 due to the close proximity to a future transit station.

G. *The site is physically suitable for the type, density, and intensity of use being proposed, including access, utilities, and the absence of physical constraints.* The proposed Project would comply with all applicable design and development standards, and the General Plan, Specific Plan and zoning. The Project's impacts have been analyzed in detail in the 2011 EIR and Addendum thereto prepared for the Project. Further, the Project would qualify for reduced parking by meeting the requirements set forth in Newark Municipal Code section 17.23.050 due to the close proximity to a future transit station.

VII. Vesting Tentative Map No. 8559

The City makes the following findings which indicate conformance with the State Subdivision Map Act and the City's Subdivision Ordinance (Newark Municipal Code Chapter 16.08):

A. The proposed map would be consistent with the General Plan and Specific Plan as specified in Government Code §65451 as it would provide sufficiently dense residential and commercial uses in an area with pre-existing commercial uses on adjacent property and the immediate area. It would also be consistent with the City's Subdivision Ordinance and the design or improvement of the proposed tentative tract map would be consistent with the General

Plan in that the property is developed by street and parcel improvements in conformance with applicable goals and policies. The proposed map would be consistent with the General Plan and Specific Plan, as amended, for all the reasons set forth in the findings relating to the concurrent General Plan and Specific Plan amendments, and would propose sufficiently dense residential and commercial mixed uses on blighted, vacant former industrial property, which the Project would significantly improve. The street and parcel improvements would comply with all City requirements, and for the reasons discussed in the findings regarding the concurrent Design Review approval, implement the goals and policies of the General Plan and Specific Plan, specifically including redeveloping the western portion of the City.

B. The design and improvements of the proposed subdivision would be consistent with applicable General Plan and Specific Plan, as amended, as the proposed subdivision would include multi-family residential and commercial development, sidewalks, pedestrian paseos, event spaces, and landscaped areas which would be adequately served by streets, and provide sufficient drainage for the development, as detailed in the findings in support of the concurrent Design Review approval, as well as the findings for the concurrent General Plan and Specific Plan amendments.

C. The site would be physically suitable for the type of development in that it is a highly disturbed, blighted for former industrial development, that would be significantly improved to support the proposed residential and commercial uses. There are no known problems regarding cultural, historical or scenic aspects. Given the topography of the site and the location of the proposed construction, it appears that grading would be minimal and in compliance with all City regulations. Therefore, the site would be physically suitable for the type of development.

D. The site would be physically suitable for the proposed density of development as the development would be within with the residential and retail capacities identified in the Specific Plan. The proposed development would be compatible with adjacent and neighboring existing developments in the surrounding area and would significantly improve an area of the City that the City's planning documents have long targeted for development

E. The design of the subdivision or the proposed improvements would not likely cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat, as set forth in detail in the CEQA addendum to the EIR prepared for this Project.. The existing subject property is a developed and highly disturbed former industrial property in an urban area. The proposed subdivision and related development would have no significant impact on the environment's flora or fauna and instead would improve a blighted area.

F. The design of the subdivision or type of improvements would not likely cause serious public health problems. Phased residential subdivisions and associated commercial development would not involve significant amounts of hazardous materials or projects, as set forth in detail in the CEQA addendum to the EIR prepared for this Project.

G. The design of the subdivision or the type of improvements would not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision. The City has reviewed the records related to the subject property and found that the subdivision would not have a conflict with any easements.

VIII. Affordable Housing – Alternative Means of Compliance to Payment of Housing Impact Fee

Pursuant to Newark Municipal Code section 17.18.050, the City finds as follows:

A. *The proposed alternative means of compliance fulfills the purposes of this chapter as set forth in Section 17.18.010, Purpose.* The alternative means of compliance would fulfill the purposes of section 17.18.010 in that the proposed Project would result in the production of affordable housing that would be available to households with incomes at the very low-, low-, and moderate-income levels. The affordable housing units would be administered through an affordable housing agreement between the City and the property owner that would establish affordability levels for a period of 55-years. The alternative means of compliance would contribute to a more economically balanced community and provides safe and stable housing for households at all income levels.

B. *The proposed alternative means of compliance will further affordable housing opportunities in the city to an equal or greater extent than compliance with the requirements of Section 17.18.020, Housing Impact Fee, and will fully mitigate the impact of the project on the need for affordable housing.* The alternative means of compliance would result in the production of affordable units that have a value equal to or greater than the required housing impact fee and as a result would fully mitigate the impact of the Project on the need for affordable housing.

C. *The proposed alternative means of compliance would better address the city's needs than compliance with the requirements of Section 17.18.020, Housing Impact Fee.* The alternative means of compliance would result in the production of affordable housing with a market rate housing project, resulting in the availability of affordable housing more immediately than what otherwise may be possible though the payment of the Housing Impact Fee.

D. *The proposed alternative means of compliance will not unduly concentrate affordable housing in one geographic area so as to result in housing segregation.* The alternative means of compliance would result in the production of family affordable housing within the Specific Plan area, which does not currently have any restricted affordable housing units, other than 72 affordable units for seniors, out of the 2,500 total residential units allowed in the Specific Plan area, and 2,171 units approved or in process therein. Therefore, there would not be an undue concentration of affordable housing units within one geographical area.

FMC Willow and Grand Park Project

Final Initial Study/Addendum to the Bayside Newark TOD Specific Plan PEIR

Prepared for:

City of Newark
Community Development Department
37101 Newark Boulevard
Newark, CA 94560

Prepared by:

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95630

June 2022

ADDENDUM TO THE PROGRAM ENVIRONMENTAL IMPACT REPORT FOR THE BAYSIDE NEWARK TOD SPECIFIC PLAN PROJECT IN THE CITY OF NEWARK

A. INTRODUCTION

The City of Newark (City) certified a Program Environmental Impact Report (PEIR) for the Bayside Newark Transit Oriented Development (TOD) Specific Plan (Specific Plan), formerly known as the Dumbarton TOD Specific Plan (State Clearinghouse No. 2010042012, July 2011). The Willow Project Owner, LLC (the current project applicant) proposed changes to the former Bayside Newark TOD Specific Plan which have been evaluated in an Initial Study (IS) that accompanies this Addendum. The analysis conducted with the IS determines whether the proposed changes to the FMC Willow and Grand Park project would result in any new or more substantial impacts that were not identified in the prior adopted 2011 PEIR.

This Addendum has been prepared to provide information regarding: (1) the history of the project; (2) a description of the proposed project modification; (3) the standards for adequacy under the California Environmental Quality Act (CEQA) and State CEQA Guidelines; (4) a description of the format and content of this Addendum; and (5) the applicable CEQA processing requirements for the proposed project.

B. BACKGROUND

The approximately 22.1-acre FMC Willow and Grand Park project site lies within the Specific Plan area, which encompasses approximately 205 acres at the western edge of the City of Newark, CA. The Specific Plan area is generally bounded by the San Mateo County Transit District (SamTrans) railroad corridor to the north, on-going salt production and harvesting facilities to the south and west, and industrial and residential land uses to the east.

The Specific Plan analyzed in the 2011 PEIR identifies the land use designations for the FMC Willow and Grand Park project site as Commercial/Retail, Commercial/Office, High Density Residential, Parks & Recreational Open Space, and Transit Station. The Specific Plan designated 4.7 acres of the FMC Willow and Grand Park project site as High Density Residential (25-60 Dwelling Units (DU)/acre) in the eastern portion of the site, which would allow for a maximum of 282 DU to be developed. The Specific Plan designated 3.3 acres of the FMC Willow and Grand Park project site for Commercial/Office space in the western portion of the site and 4.7 acres for Commercial/Retail in the northern portion of the site. The Specific Plan also set aside 2.7 acres for a future transit station in the north portion of the site and 1.7 acres for public streets. Five (5) acres of the FMC Willow and Grand Park project site were designated for parks and recreational space.

C. OVERVIEW OF THE PROPOSED PROJECT

The FMC Willow and Grand Park project proposes modifications to the land uses identified within the FMC Willow and Grand Park portion of the Specific Plan area. The proposed FMC Willow and Grand Park project would redevelop the 22.1-acre site into a 370-unit multi-family community including 279 townhouse units, a 1.6-acre mixed-use area of 3,600 square feet (sf) of retail, a club room, a fitness center, and 90 affordable units (plus 1 manager unit) within a 6-story building, a 5-acre community park (Grand Park), and a 1,485-sf community building, along with approximately 1.8 acres set aside for a future transit station.

The proposed project would change the total gross acreage of the land use planning area by more than 20 percent from the original gross acreage approved under the Specific Plan by reducing commercial/office, commercial/retail, high density, and transit station land uses. Therefore, the project applicant is seeking a Specific Plan Amendment to change the Specific Plan land use designations in the project site from Commercial/Retail, Commercial/Office, High Density Residential, Transit Station, Parks & Recreational Open Space to Commercial Mixed Use, Medium/High Density Residential, Transit Station, Restricted Use Areas, and Parks & Recreational Open Space. The proposed project would amend the Specific Plan land use designations on the project site to allow for 1.2 acres of Commercial/Mixed Use and 13.1 acres of Medium/High Density Residential (16-60 DU/acre) to allow for the development of the proposed 370-unit mixed use community. The Specific Plan Amendment would allow up to 504 more residential dwelling units to be developed on the project site than currently allowed. The Specific Plan planned for the development of a total of 2,500 DU and 35,000 sf of retail. As of February 2022, 2,171 DU and 3,600 sf of retail have been approved or are pending approval in the Specific Plan area, including the proposed FMC Willow and Grand Park project.

The proposed project would require a General Plan amendment to change the General Plan land use designations of the project site from Community Commercial, High Density Residential, Parks and Recreational Facilities, and Public Institutional to Medium Density Residential, Commercial Mixed Use, Public Institutional, and Parks and Recreational Facilities. The proposed project would amend the General Plan land use designations on the project site to allow for 1.2 acres of Commercial/Mixed Use and 13.4 acres of Medium Density Residential (14-30 DU/acre) to allow for the development of the proposed 370-unit mixed use community. The General Plan Amendment would allow for 48 more residential dwelling units to be developed on the project site than currently allowed.

The proposed project would require a zoning map amendment to change the zoning of the project site from Business and Technology Park and Park to Medium Density Residential - Form Based Code, Commercial/Mixed Use - Form Based Code, Transit Station, Public Facilities, and Park. On January 24, 2019, the Newark City Council unanimously voted to rezone the 5-acre Grand Park site from Business and Technology Park (BTP) to Park (PK). The proposed project includes the reconfiguration of the previously approved Grand Park site to ensure that no residential dwellings are developed on the

remediation site. With this reconfiguration, the Grand Park site would still be 5 acres, but the easternmost boundary line of the proposed park site would be shifted farther east as part of the proposed FMC Willow and Grand Park project while its northeastern corner would be adjusted to the southwest. Therefore, the areas of the reconfigured Grand Park site that are currently zoned for BTP would need to be rezoned by the City to allow for parks and recreational open space use.

Additional required entitlements for the project include a Design Review, Vesting Tentative Subdivision Map, Density Bonus Incentive, and Minor Use Permit.

D. BASIS FOR AN ADDENDUM

The State CEQA Guidelines environmental review procedures allow for the updating and use of a previously adopted PEIR for projects that are different from the previous project or the conditions under which the project was analyzed. Section 15164 of the State CEQA Guidelines states the following with respect to an addendum to an adopted PEIR:

a) The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.

c) An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.

d) The decision making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project.

e) A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in an addendum to an EIR, the lead agency's findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

In accordance with State CEQA Guidelines Section 15164, this Addendum has been prepared to document that the proposed project modifications do not require preparation of a subsequent EIR or negative declaration under Section 15162.

The proposed FMC Willow and Grand Park project is similar to the project evaluated in the adopted 2011 PEIR because the proposed project involves a commercial/mixed-use and residential development, a future transit station and recreational open space. As supported in the analysis contained in the accompanying IS, there are no substantial changes proposed in the FMC Willow and Grand Park project which would result in any new significant environmental effects or a substantial increase in the severity of previously identified significant effects. There is no new information of substantial importance which was not known for the 2011 PEIR, and no new mitigation measures are necessitated by the project.

None of the circumstances listed in State CEQA Guidelines Section 15162 requiring the preparation of a subsequent PEIR are present, and only minor technical changes or additions are necessary to update the previously adopted 2011 PEIR; therefore, an addendum may be prepared.

E. FORMAT, CONTENT, AND CONCLUSIONS OF THIS ADDENDUM

The accompanying CEQA IS and associated technical studies comprise the Addendum to the PEIR for the Bayside Newark TOD Specific Plan. The following project-specific studies were prepared and are included as appendices to the IS:

- Air Quality and Greenhouse Gas Emissions Technical Report
- Biological Resources Technical Report
- Cultural Resources Assessment
- Noise Assessment Technical Report
- Due Diligence Geotechnical Investigation
- Trip Generation and Intersection Operation Analysis

As described above, the IS has been prepared to determine whether the project analyzed in the certified PEIR would require major revisions due to any new or more severe significant environmental impacts in the proposed FMC Willow and Grand Park project. Changes in the Specific Plan land use designations, General Plan land use designations, zoning, and site design necessitated a reevaluation of the impacts for the proposed FMC Willow and Grand Park project.

The 2011 PEIR found that the approved project could have potentially significant impacts on air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, public services, utilities and service systems, and transportation and traffic. However, all potentially significant impacts for the 2011 PEIR were reduced to a less than significant impact with mitigation.

The majority of the FMC Willow and Grand Park project site has been disturbed through intensive ground disturbance and soil remediation that included the export of contaminated soil and import of clean fill. The project will not introduce new or more significant impacts that were not previously disclosed in the Specific Plan PEIR. Based on the conclusions of the IS, an Addendum to the certified PEIR is the appropriate CEQA-compliance document for the proposed project.

The following definitions are used in the IS:

Potentially Significant Impact: Any potentially significant impact of the proposed project that was not previously analyzed in the PEIR.

Less than Significant with Mitigation Incorporated: Any potential impacts of the proposed project not previously analyzed in the certified PEIR but found to be less than significant with previously prescribed mitigation from the PEIR incorporated.

Less than Significant: Any potential impacts of the proposed project not previously analyzed in the PEIR, but which are found to be less than significant.

No New Impact: The proposed project would not result in an impact or would result in an impact found to be equal to or less than the impact analyzed in the PEIR.

F. ADDENDUM PROCESSING

The City of Newark directed and supervised the preparation of this Addendum, which has been reviewed and determined to be complete and accurate by the Planning Department. The City has concluded, based on the accompanying IS, that an Addendum is the appropriate CEQA compliance document for the proposed FMC Willow and Grand Park project.

TABLE OF CONTENTS

Section **Page**

INITIAL STUDY INFORMATION SHEET vii
1.0 INTRODUCTION 1
2.0 PROJECT BACKGROUND 2
3.0 DESCRIPTION OF PROJECT 4
3.1 PROJECT LOCATION 4
3.2 PROJECT SETTING 4
3.3 PROPOSED FMC WILLOW AND GRAND PARK PROJECT 4
4.0 REQUIRED APPROVALS 12
5.0 PREVIOUS RELEVANT ENVIRONMENTAL ANALYSIS 13
Incorporation of the Previous Relevant Environmental Analysis 13
Evaluation of the FMC Willow and Grand Park Project 13
6.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED 14
7.0 DETERMINATION 15
8.0 ENVIRONMENTAL INITIAL STUDY CHECKLIST 16
I. AESTHETICS 17
II. AGRICULTURE AND FORESTRY RESOURCES 20
III. AIR QUALITY 22
IV. BIOLOGICAL RESOURCES 40
V. CULTURAL RESOURCES 61
VI. GEOLOGY/SOILS 69
VII. GREENHOUSE GAS EMISSIONS 74
VIII. HAZARDS AND HAZARDOUS MATERIALS 83
IX. HYDROLOGY AND WATER QUALITY 89
X. LAND USE AND PLANNING 95
XI. MINERAL RESOURCES 100
XII. NOISE 101
XIII. POPULATION AND HOUSING 117
XIV. PUBLIC SERVICES 119
XV. RECREATION 122
XVI. TRANSPORTATION 124
XVII. UTILITIES AND SERVICE SYSTEMS 131
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE 137
9.0 REFERENCES 139
10.0 PREPARERS 144

TABLE OF CONTENTS (cont.)

LIST OF APPENDICES

A Mitigation Monitoring and Reporting Program for the FMC Willow and Grand Park Project
B Air Quality and Greenhouse Gas Emissions Technical Report for the FMC Willow and Grand Park Project
C Biological Resources Technical Report for the FMC Willow and Grand Park Project
D Cultural Resources Assessment for the FMC Willow and Grand Park Project
E Due Diligence Geotechnical Investigation for the FMC – Willow Parcel
F Noise Assessment Technical Report for the FMC Willow and Grand Park Project
G Trip Generation and Intersection Operations Analysis Memorandum for the FMC Willow and Grand Park Project

LIST OF FIGURES

No.	Title	Follows Page
1	Vicinity Map	5
2	Aerial Map	5
3	Site Plan	5
4	Site Design	5
5	Habitat Map	47
6	Specific Plan Land Use Changes	99
7	General Plan Land Use Changes	99
8	Zoning Changes	99

LIST OF TABLES

No.	Title	Page
Table 1.	Buildout of Specific Plan Area	2
Table 2.	San Francisco Bay Area Air Basin Attainment Status	25
Table 3.	Air Quality Monitoring Data	26
Table 4.	BAAQMD Significance Thresholds	28
Table 5.	Unmitigated Maximum Daily Construction Emissions	31
Table 6.	Mitigated Maximum Daily Construction Emissions	32
Table 7.	Maximum Daily Operational Emissions (Pounds Per Day)	33
Table 8.	Annual Operational Emissions (Tons Per Year)	33
Table 9.	Concurrent Daily Emissions (Pounds Per Day)	34
Table 10.	Project Residential Increased Incremental Cancer Risk from Train DPM	38
Table 11.	Existing Vegetation Communities and Land Cover Types in the Project Site	47
Table 12.	Regional Special-Status Species with Potential to Occur in the Project Site	49
Table 13.	Global Warming Potentials and Atmospheric Lifetimes	75
Table 14.	Construction GHG Emissions	79
Table 15.	Total Operational GHG Emissions	80
Table 16.	Specific Plan Amendment Impact to Maximum Allowable Dwelling Units on Project Site	97
Table 17.	General Plan Amendment Impact to Maximum Allowable Dwelling Units on Project Site	98
Table 18.	Off-Site Traffic Noise Levels	112

ACRONYMS

AB	Assembly Bill
ACFC	Alameda County Flood Control and Water Conservation District
ACFD	Alameda County Fire Department
ACWD	Alameda County Water District
AC Transit	Alameda County Transit District
ADT	Average Daily Trip
APN	Assessor's Parcel Number
BAAB	San Francisco Bay Area Air Basin
BAAQMD	Bay Area Air Quality Management District
BCMM	basic construction mitigation measure
bgs	below ground surface
BSA	Berlogar Stevens & Associates
BTP	Business Technology Park
BTR	Biological Resources Technical Report
C_2F_6	hexafluoroethane
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CadnaA	Computer Aided Noise Abatement
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBG	Carlson, Barbee & Gibson, Inc.
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CF_4	tetraflouromethane
CFC	chlorofluorocarbon
CH_4	methane
City	City of Newark
CMU	Commercial Mixed-Use
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
COA	Condition of Approval
County	County of Alameda

CRA	Cultural Resources Assessment
CRHR	California Register of Historic Resources
CRPR	California Rare Plant Rank
CWA	Clean Water Act
dB	decibel
dBA	A-weighted decibel
dbh	diameter at breast height
DMA	Drainage Management Area
DMU	diesel multiple unit
DPM	diesel particulate matter
DTCS	Dumbarton Transportation Corridor Study
DU	dwelling unit
EIR	Environmental Impact Report
EPA	United States Environmental Protection Agency
EVA	Emergency Vehicle Access
FBC	Form Base Code
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FTA	Federal Transit Administration
GHG	Greenhouse Gas
GWP	global warming potential
HDR	High Density Residential
HELIX	HELIX Environmental Planning, Inc.
HFC	hydrofluorocarbon
hp	horsepower
HRA	Health Risk Assessment
HVAC	heating, ventilation, and air conditioning
Hz	Hertz
IPCC	Intergovernmental Panel on Climate Change
ISA	International Society of Arboriculture
kHz	kilohertz
kW	kilowatt
kWhr	kilowatt hour
L_{DN}	Day-Night sound level
L_{EQ}	time-averaged noise level
LID	Low Impact Development
MBTA	Migratory Bird Treaty Act
mg/m^3	milligrams per cubic meter
mgd	million gallons per day
MHDR	Medium/High Density Residential

MMRP	Mitigation Monitoring and Reporting Program
mPa	micro Pascal
mph	miles per hour
MT	metric tons
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NO	nitrogen oxide
NO_2	nitrogen dioxide
NO_X	nitrogen oxides
NPDES	National Pollution Discharge Elimination System
NRHP	National Register of Historic Places
NSLU	noise sensitive land use
NUSD	Newark Unified School District
NWIC	Northwest Information Center
O_3	ozone
OHP	Office of Historic Preservation
PA	Planning Area
Pb	lead
PEIR	Program Environmental Impact Report
PFC	perfluorocarbon
PI	Plasticity Index
PJD	Preliminary Jurisdictional Determination
PM_{10}	particulate matter less than 10 microns
$PM_{2.5}$	particulate matter less than 2.5 microns
ppm	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
Project	FMC Willow Project
RMP	Risk Management Plan
ROG	reactive organic gas
ROW	Right-of-Way
rpm	revolutions per minute
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SamTrans	San Mateo County Transit District
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF	Square feet
SF_6	hexafluoride
SFPUC	San Francisco Public Utility Commission
SIP	State Implementation Plan
SLF	Sacred Lands File

SMHM	Salt Marsh Harvest Mouse
SO_2	sulfur dioxide
SO_X	sulfur oxides
Specific Plan	Bayside Newark Transit Oriented Development Specific Plan
SPL	sound pressure level
SRA	State Responsibility Area
STC	Sound Transmission Class
S_{WL}	Sound Power Level
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminant
TNM	Traffic Noise Model
TOD	Transit Oriented Development
TS	Transit Station
USACE	United States Army Corps of Engineers
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Services
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
VdB	vibration velocity decibels
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compound
WSA	Water Supply Assessment

INITIAL STUDY INFORMATION SHEET

1.	Project title:	FMC Willow and Grand Park Project
2.	Lead agency name and address:	City of Newark Community Development Department 37101 Newark Boulevard Newark, CA 94560
3.	Contact person and phone number:	Art Interiano (510) 578-4331
4.	Project location:	Northwest corner of the intersection of Willow Street and Enterprise Drive, Newark, CA 94560
5.	Project sponsor's name and address:	The Willow Project Owner, LLC Attn: Glenn Brown 2603 Camino Ramon, Suite 480 San Ramon, CA 94583 (925) 984-7137
6.	Current General Plan designation:	Public-Institutional, Community Commercial, High Density Residential, Parks and Recreational Facilities
7.	Current Zoning:	Business and Technology Park, Park
8.	Current Bayside Newark TOD Specific Plan land use designation:	Commercial/Retail, Commercial/Office, High Density Residential, Transit Station, and Parks and Recreational Open Space

1.0 INTRODUCTION

The City of Newark (City) certified a Program Environmental Impact Report (PEIR) for the Bayside Newark Transit Oriented Development (TOD) Specific Plan (Specific Plan), formerly known as the Dumbarton TOD Specific Plan, in July 2011 (State Clearinghouse No. 2010042012). This Initial Study addresses a project proposed by The Willow Project Owner, LLC for property within the Bayside Newark TOD Specific Plan area, and whether it may cause significant effects on the environment. The potential environmental effects of the FMC Willow and Grand Park project are further evaluated to determine whether they were examined in the Specific Plan PEIR. Consistent with Public Resources Code (PRC) Section 21083.3 and State California Environmental Quality Act (CEQA) Guidelines Section 15162 and 15168(c)(2), this Initial Study focuses on any effects on the environment that are specific to the proposed FMC Willow and Grand Park project, or to the parcels on which the project would be located, which were not analyzed as potentially significant effects in the PEIR prepared for the Specific Plan, or for which substantial new information shows that identified effects would be more significant than described in the PEIR.

This Initial Study relies on State CEQA Guidelines environmental review procedures that allow for the updating and use of a previously certified PEIR for projects that are different from the previous project or the conditions under which the project was analyzed. The following subsections of Section 15164 of the State CEQA Guidelines state the following with respect to an addendum to a certified PEIR:

a) The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.

c) An addendum need not be circulated for public review but can be included in or attached to the final EIR or adopted negative declaration.

d) The decision making body shall consider the addendum with the final EIR or adopted negative declaration prior to making a decision on the project.

e) A brief explanation of the decision not to prepare a subsequent EIR pursuant to Section 15162 should be included in the addendum to an EIR, the lead agency's findings on the project, or elsewhere in the record. The explanation must be supported by substantial evidence.

In accordance with State CEQA Guidelines Section 15164, this Initial Study has been prepared to document that the proposed project modifications do not require preparation of a subsequent EIR under Section 15162.

The environmental impacts of the proposed project are substantially similar to the project evaluated in the certified PEIR. As supported in the analysis contained in this Initial Study, there are no substantial changes proposed to the project which would result in any new significant environmental effects or a substantial increase in the severity of previously identified significant effects. There is no new information of substantial importance which was not known for the certified PEIR, and no new mitigation measures are necessitated by new significant impacts.

None of the circumstances listed in State CEQA Guidelines Section 15162 requiring the preparation of a subsequent EIR are present, and only minor technical changes or additions are necessary to update the previously certified PEIR; therefore, an addendum may be prepared.

2.0 PROJECT BACKGROUND

The approximately 22.1-acre FMC Willow and Grand Park project site lies within the Specific Plan area which encompasses approximately 205 acres at the western edge of the City of Newark, CA. The Specific Plan area is generally bounded by the San Mateo County Transit District (SamTrans) railroad corridor to the north, on-going salt production and harvesting facilities to the south and west, and industrial and residential land uses to the east. A Final PEIR (State Clearinghouse No. 2010042012) was prepared and certified, and the Specific Plan was adopted by the City in 2011.

The Specific Plan allows for an adjustment of land uses within the Specific Plan area without necessitating a Specific Plan Amendment as long as the total gross acreage of a land use planning area does not change by more than 20 percent from the original gross acreage approved under the Specific Plan and the net increase of dwelling units does not exceed the total dwelling units permitted by the Specific Plan (2,500 units). The Specific Plan identifies the parcels and portions of parcels comprising the FMC Willow and Grand Park property as commercial (retail/office), high density residential, transit station, and parks and recreational open space. The Specific Plan planned for the development of up to 2,500 dwelling units (DU) and 35,000 square feet (sf) of retail/commercial. As of June 2022, a total of 2,171 DU and 3,600 sf of retail/commercial have been approved or are pending approval in the Specific Plan area, including the proposed FMC Willow and Grand Park project (see Table 1 below).

TABLE 1.
APPROVED/PENDING VS. PLANNED BUILDOUT OF SPECIFIC PLAN AREA

Land Use	Approved/Pending Units	Units Planned in Bayside Newark	Delta
Residential Dwelling Units			
Single Family Homes	1,169 DU	168 DU	+1,001 DU
Townhomes/Condos/Apartments	927 DU	2,332 DU	-1,405 DU
Senior Housing	75 DU	--	+75 DU
Total Dwelling Units	**2,171 DU**	**2,500 DU**	**-329**
Retail/Commercial	3,600 sf	35,000 sf	-31,400 sf
General Office	0 sf	195,000 sf	-195,000 sf
Park	5 acres	5 acres	0 acres

Source: City of Newark 2021.

On January 24, 2019, the Newark City Council unanimously voted to rezone the 5-acre Grand Park site from Business and Technology Park (BTP) to Park (PK). The City required the construction and dedication of this park as a Condition of Approval (COA) for the 17.4-acre Harbor Pointe housing development (formerly known as the FMC Parcel C Project) that borders the Grand Park site to the west; that development was also covered under the Specific Plan PEIR. The rezoning was added to the consent calendar on February 14, 2019 for a second reading, and the City affirmed its approval. On January 25,

2019, the City filed a Notice of Determination (NOD) with the Alameda County Clerk stating that the City had approved the rezoning of the Grand Park site; a second NOD was filed on February 15, 2019, following the previous day's council meeting, indicating that the City had approved the rezoning of the Grand Park site for a second time.

The majority of the 5-acre Grand Park proposed as part of the proposed FMC Willow and Grand Park project would be located on the land rezoned to PK as approved by the City in 2019 (described above). However, while the size of the Grand Park would remain the same (5 acres), the proposed boundary of Grand Park has been adjusted as part of the proposed project, and, as currently proposed, it incorporates additional land on the eastern boundary that is designated as commercial/office by the Specific Plan and is currently zoned as BTP by the City. Therefore, the areas of the Grand Park site that are currently zoned for BTP would need to be rezoned by the City to allow for parks and recreational open space use, and this action is evaluated in this Initial Study.

Several technical studies used in preparation of the adopted PEIR have been incorporated into the analysis set forth in this Initial Study, as applicable, and as described further in Section 5, Previous Relevant Environmental Analysis. Additionally, the following FMC Willow and Grand Park project-specific technical reports, assessments, and surveys were used in preparation of this Initial Study and are hereby incorporated by reference:

- Tract 8559 – Vesting Tentative Map, FMC Willow and Grand Park, October 20, 2021, prepared by Carlson, Barbee & Gibson, Inc. (CBG 2021).
- Air Quality and Greenhouse Gas Emissions Technical Report, December 2021, prepared by HELIX Environmental Planning, Inc. (HELIX 2021a).
- Biological Resources Technical Report, December 2021, prepared by HELIX (HELIX 2021c).
- Cultural Resources Assessment, December 2021, prepared by HELIX (HELIX 2021d).
- Noise Assessment Technical Report, December 2021, prepared by HELIX (HELIX 2021b).
- Due Diligence Geotechnical Investigation, FMC – Willow Parcel, Enterprise Drive at Hickory Street, Newark, California, August 22, 2018, prepared by Berlogar Stevens & Associates (BSA 2018).
- Trip Generation and Intersection Operations Analysis for the FMC Willow and Grand Park Project, November 2021, prepared by Fehr & Peers (Fehr & Peers 2021).

3.0 DESCRIPTION OF PROJECT

3.1 PROJECT LOCATION

The proposed project site is located within the City of Newark in southwestern Alameda County, northwest of the intersection of Willow Street and Enterprise Drive. The proposed FMC Willow and Grand Park project would be located on the following six Assessor's Parcel Numbers (APNs): 092-0100-013, 092-0100-014, 537-0852-028, 537-0852-029, 537-0852-030, and 537-0852-031. The majority of the proposed project site is located in Sections 2 and 11, of Township 5 South, and Range 2 West of the U.S. Geological Survey (USGS) 7.5-minute "Newark" quadrangle map (quad). The western portion of the site is unsectioned (unsurveyed). Refer to Figure 1 for the project's regional location and Figure 2 for an aerial photograph of the project site that depicts the APNs of the associated properties.

3.2 PROJECT SETTING

The project site is a former industrial chemical plant that was active until the 1990s. Subject to years of soil remediation activities, the site is barren except for remnant cement pads and cement and asphalt roads. The project site is bordered by the SamTrans railroad corridor to the north, residential development to the west, Enterprise Drive and planned mixed use developments to the south, and Willow Street to the east. The Hetch Hetchy pipeline right-of-way (ROW), owned and operated by the City and County of San Francisco Public Utility Commission (SFPUC), transects the project site (see Figures 3 and 4 for the site plan and design). Part of the Don Edwards San Francisco Bay National Wildlife Refuge is approximately 1,000 feet northwest of the project site, on the other side of the existing SamTrans railroad tracks. The surrounding land uses are characterized by existing and former industrial parcels, railroad, and residential and mixed-use development.

Terrain in the project site and surrounding area has been altered by industrial development, and most existing topographic relief is the result of fill for the railroad and industrial pads, excavation of artificial basins and channels, and diking of tidelands. The project site consists of leveled industrial pads, asphalt roads, and railroad embankments. Terrain in the area surrounding the project site is primarily flat. Elevations on the project site are between approximately 9 feet and 12 feet (NGVD29) from west to east. Precipitation and municipal water are the sources of water at the project site.

The project site contains no natural biological communities. Following extensive soil remediation that included the export of contaminated soils and import of clean fill, the majority of the site is disturbed but is vegetated by weedy species typical of the region.

3.3 PROPOSED FMC WILLOW AND GRAND PARK PROJECT

The proposed project would redevelop the 22.1-acre site into a 370-unit multi-family community including a mixed-use area of 3,600 square feet (sf) of retail, a club room, a fitness center, and 90 affordable units (plus 1 manager unit), a 5-acre community park (Grand Park), and a 1,485-sf community building, along with approximately 1.8 acres set aside for a future transit station. The proposed residential land uses on-site would be medium density residential (14-30 DU/acre). The project would also provide a 20-foot-wide trail corridor, containing a 12-foot-wide multi-purpose trail, that runs along the northwest boundary of the project site and curves to the south, transecting the Grand Park, to avoid pedestrian crossing of the Hetch Hetchy ROW. At the intersection with Enterprise Drive, the trail

corridor reduces to a 12-foot-wide corridor and continues east along the north side of Enterprise Drive and curves north up Willow Street along the project site frontage. It is anticipated that the proposed trail would be eligible to be part of the regional San Francisco Bay Trail, a bicycle and pedestrian trail that will eventually allow continuous travel along the shoreline of San Francisco Bay.

The Hetch Hetchy ROW is a 100-foot-wide corridor that transects the project site. Approximately seven (7) acres of the project site are north of the Hetch Hetchy ROW, and approximately 15 acres of the project site are south of the Hetch Hetchy ROW. No aboveground development would occur within the Hetch Hetchy ROW; however, a 12-inch water line and 24-inch storm drain line would be installed underground and cross the Hetch Hetchy ROW.

Additional proposed site improvements include the following: on- and off-street parking, open space and common areas, drive aisles, underground utilities, Low Impact Development (LID) drainage and water quality treatment structures, lighting, sidewalks, and landscaping. Refer to Figure 3 for the site plan and Figure 4 for the site design elements.

The proposed project would require a Specific Plan Amendment from Commercial/Retail, Commercial/Office, High Density Residential, Transit Station, Parks & Recreational Open Space to Commercial Mixed Use, Medium/High Density Residential, Transit Station, Restricted Use Areas, and Parks & Recreational Open Space. It would also require a General Plan Amendment from Community Commercial, High Density Residential, Parks and Recreational Facilities, and Public Institutional to Medium Density Residential, Commercial Mixed Use, Public Institutional, and Parks and Recreational Facilities. A Zoning Map Amendment would also be needed to rezone the site from Business and Technology Park and Park to Medium Density Residential - Form Based Code, Commercial/Mixed Use - Form Based Code, Transit Station, Public Facilities, and Park.

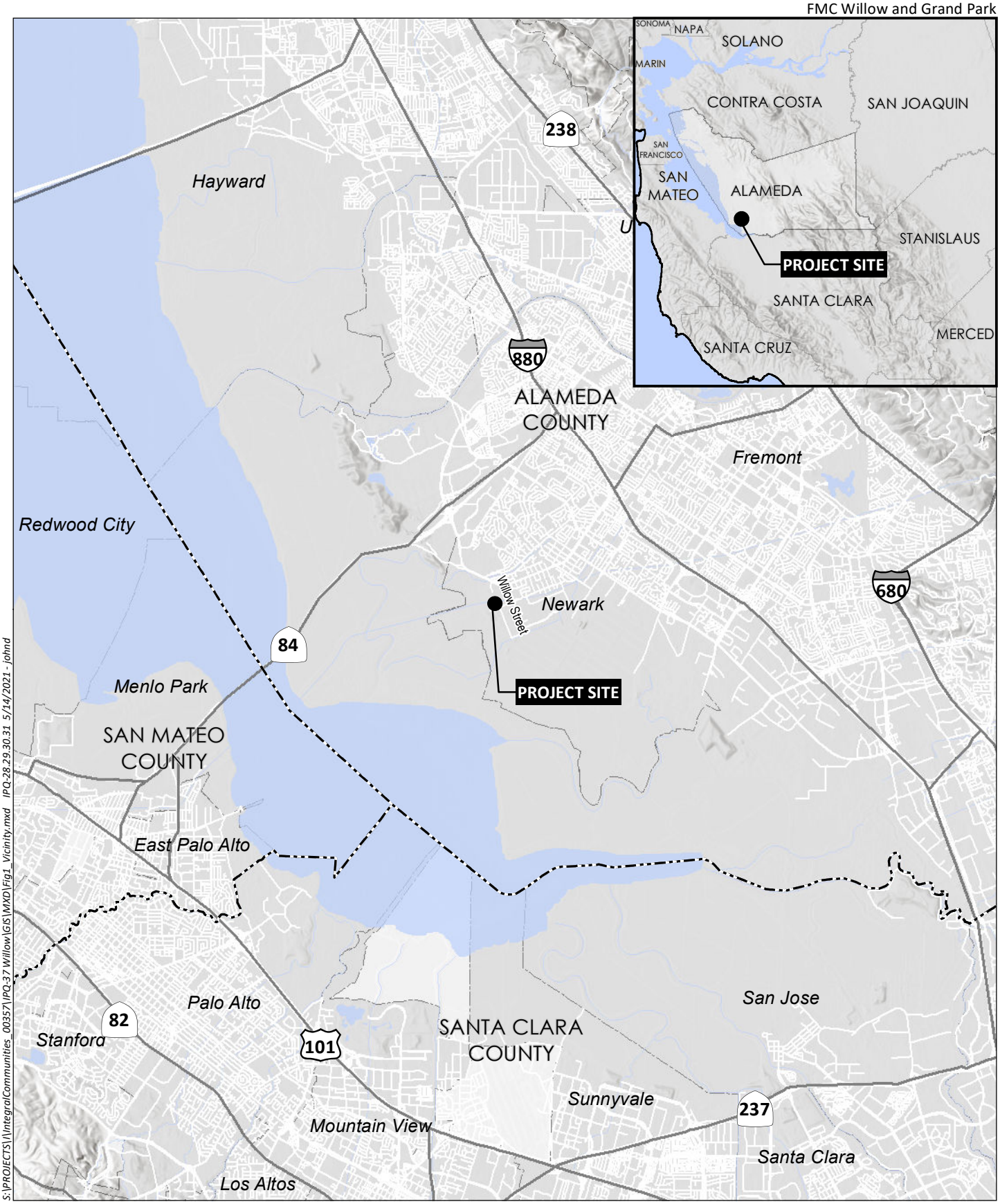
The residential and commercial components of the proposed project are split into four (4) planning areas that are described in detail below. Refer to Figure 4 for the site design plan that depicts the project planning areas.

Planning Area 1

Planning Area 1 (PA1) is located north of the Hetch Hetchy ROW, south of ‘G’ Street, and west of the Willow Street frontage, and proposed for commercial mixed-uses, including high density residential development. PA1 would consist of a mixed-use building that would include 3,600 sf of mixed-use retail space and 90 affordable living units plus 1 manager unit on approximately 1.2 acres. The sizes of the apartment units would range between 574 to 1,060 sf and four floor plan options would be available for the affordable units. The affordable units would be deed restricted in accordance with the terms of the Affordable Housing Agreement amongst the applicant and the City of Newark.

The 6-story mixed-use building is proposed to have retail and parking on the first floor, residential, residential amenities, and retail on the second floor, and all residential on the third floor and higher.

Net density for PA1 would be approximately 75.8 DU per acre.

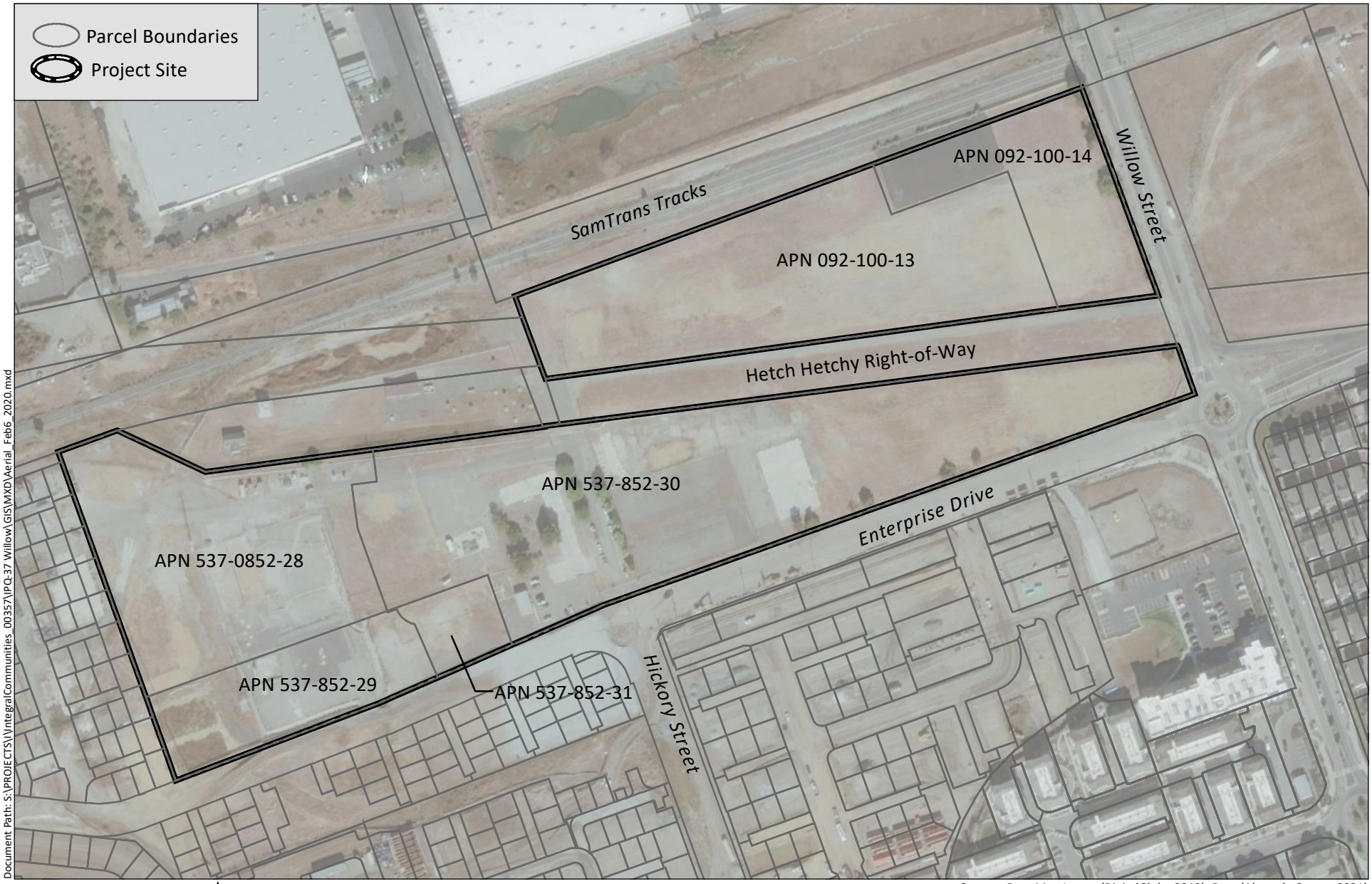


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HELIX Environmental Planning

Vicinity Map

Figure 1



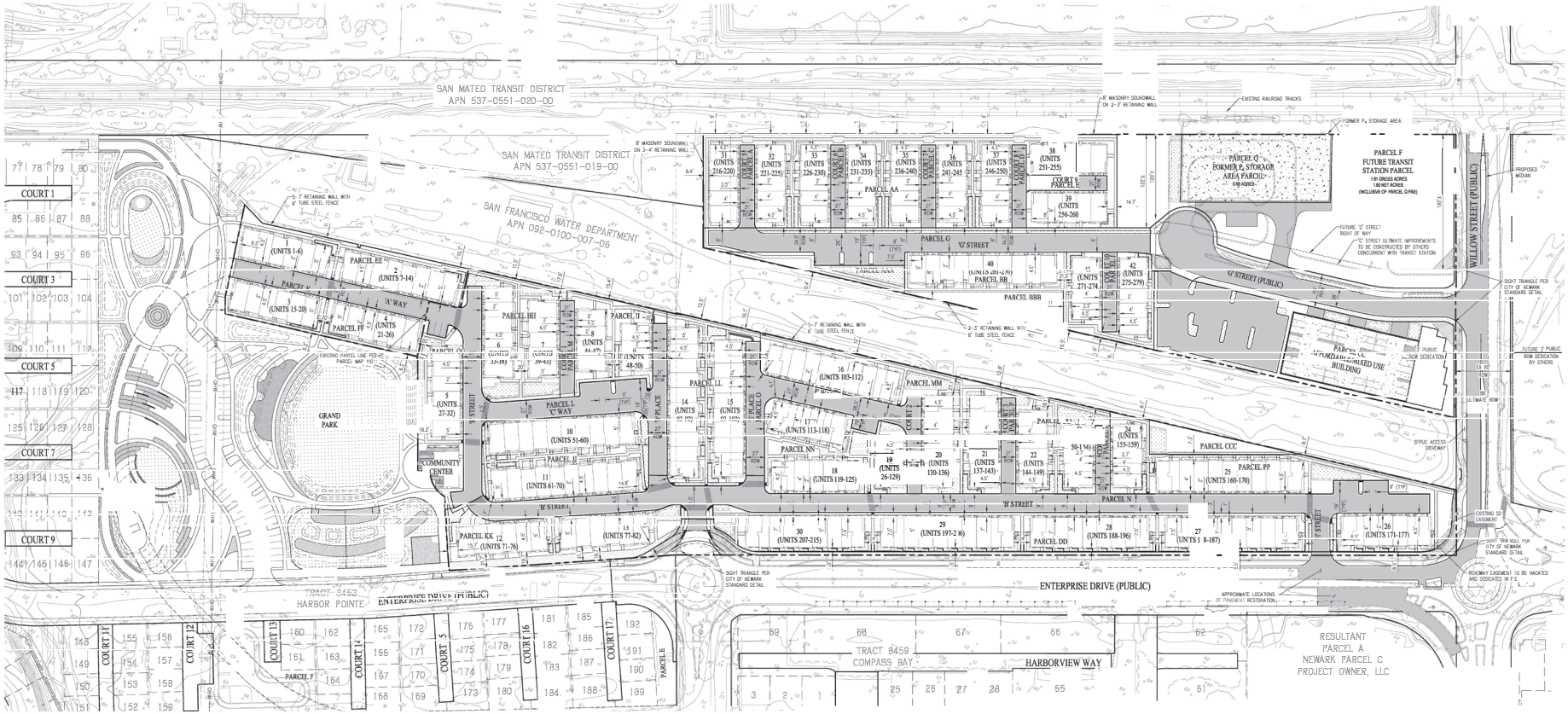
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Source: Base Map Layers (DigitalGlobe 2019); Data (Alameda County 2021)

HELIX Environmental Planning

Aerial Map

Figure 2



Source: Urban Arena 2022

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HELIX Environmental Planning

Site Plan

Figure 3



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Source: Urban Arena 2022

HELIX Environmental Planning

Site Design

Figure 4

Planning Area 2

Planning Area 2 (PA2) is in the northern portion of the project site adjacent to the Hetch Hetchy ROW, west of the proposed transit station and proposed for medium density residential development. PA2 would provide 64 UA Stack units in thirteen buildings. The buildings would be located on 3.6 acres and achieve an overall density of 17.8 DU per acre. Five floor plan options would be available for the units in this medium density neighborhood.

Planning Area 3

Planning Area 3 (PA3) is in the southern portion of the project site along the Enterprise Drive frontage, west of Willow Street and east of Hickory Street and proposed for medium density residential development. PA3 would provide 123 UA Split units in sixteen buildings. The buildings would be located on 5.4 acres and achieve an overall density of 22.8 DU per acre. There would 45 units along Enterprise Drive that feature four-story architecture, and 78 three-story units that would not be along the Enterprise Drive frontage. Seven floor plan options would be available for the units in this medium density neighborhood.

Planning Area 4

Planning Area 4 (PA4) is in the southern portion of the project site, east of Hickory Street and proposed for medium density residential development. PA4 would provide 92 three-story townhouse style units on 4.5 acres and achieve an overall density of 20.4 DU per acre. Three floor plan options would be available for the units in this medium density neighborhood. This area also includes the 1,485-sf community building (the Hub Clubroom), which would be located along the eastern edge of the Grand Park.

Grand Park

The 5-acre Grand Park is in the western portion of the project site and extends from Enterprise Drive to the south to the SamTrans railroad corridor to the north. The park would include a variety of amenities, including landscaped areas, bicycle parking, open space for recreation, walking paths that connect to the San Francisco Bay Trail that runs along Enterprise Drive to Willow Street, a sports field, small and large dog parks, a restroom and drinking fountains, a gazebo, a seating area for weddings, wildflower gardens and retention basins, trash receptacles, lawn games, lighting features, and a variety of other seating areas. A park access road with designated parking spaces and a vehicle turnaround runs roughly north/south through most of the park.

Transit Station

The proposed project would dedicate 1.8 acres of land that would be reserved for a Transit Station until an official City decision is made regarding the development of a Transit Station. When combined with other adjacent land parcels identified in the Specific Plan, this 1.8 acres would satisfy acreage requirements for the Transit Station identified in the Specific Plan. The proposed project would include the construction of a two-lane entrance road off Willow Street that would provide access to the Transit Station area and construction of interim improvements to the Transit Station parcel.

Landscaping

The project proposes a landscaping plan that includes ornamental trees, shrubs, and groundcover. The conceptual landscaping design concentrates plantings along perimeter of the project site, along proposed neighborhood roadways, and around the parking areas. Less than 30 percent of landscaped area would include paved or graveled surfaces, and less than 25 percent of landscaped areas in both the residential portion and Grand Park would be turf. All proposed street trees would be a minimum 24-inch size box and provided in between every six (6) parking spaces. At least 10 percent of the parking lot area for the commercial mixed use would be landscaped. The proposed project would implement Bay-friendly landscaping practices in accordance with the City's municipal code including, but not limited to, using mulch, amending soil with compost before planting, reducing and recycling landscaping waste, planting native drought tolerant plants, minimizing lawn areas, and installing weather-based irrigation controllers.

Circulation

Vehicular Access/Street Design

Planning Areas 1 and 2 would be accessible directly from one access point along Willow Street. A two-lane entrance road and system of interior roads and alleyways would provide vehicular access and circulation throughout the proposed development, north of the Hetch Hetchy ROW. A 45-foot radius eccentric cul-de-sac would be constructed at the terminus of the public portion of the proposed 'G' street which terminates east of PA2 and south of the Transit Station area. The cul-de-sac has been designed to accommodate the entry and exit of buses and emergency vehicles. West of the cul-de-sac, 'G' street would continue as a private driveway to access PA2.

Planning Areas 3 and 4, including the community building adjacent to the Grand Park, would be accessible directly from two access points along Enterprise Drive in the southern portion of the project site. The proposed project includes the extension of Hickory Street north of Enterprise Drive to access those planning areas in the southern portion of the project site. No roads, bridges, or paths would be constructed to cross the Hetch Hetchy ROW. One additional access point would be constructed along Enterprise Drive to allow direct access from Enterprise Drive to the proposed Grand Park. See Figures 3 and 4 for the site plan and design elements.

Parking

The City requires 2 off-street, covered parking spaces with 0.5 guest parking spaces per townhouse unit; 1.5 parking spaces per 1 bedroom unit and 2 parking spaces per 2-3 bedroom unit be provided for affordable units; and 3 parking spaces per 1,000 sf greater than 5,000 sf be provided for the retail space. The proposed project would construct 370 residential units (90 affordable units, 1 manager's unit, and 279 townhouse units) and 3,600 sf of retail, requiring 861 parking spaces. Due to the project's proximity to the Transit Station, the project applicant is seeking a 20 percent reduction in the required parking spaces. The project applicant is also seeking a density bonus incentive to reduce the number of required parking spaces for the affordable units to be 1 parking space per affordable unit. If approved by the City, the required parking spaces for the project would be reduced to 649 spaces.

In PA1, which includes the 90 affordable units plus 1 manager unit and 3,600 sf of retail, 163 parking spaces are required. The proposed project would provide 50 parking spaces within the proposed parking garage, 41 uncovered affordable unit parking spaces within the parking lot adjacent to the west of the mixed-use building, and 18 uncovered retail parking spaces for a total of 109 parking spaces.

Of the 630 parking spaces proposed to be provided for the 279 market-rate, townhouse units in PAs 2, 3, and 4, 558 parking spaces would be off-street garage parking spaces; 40 would be on-street in-tract parking spaces; and 32 would be on-street off-site parking spaces.

A total of 739 parking spaces are proposed to be provided which is 122 parking spaces less than required but 90 parking spaces more than required with City approval of the 20 percent parking reduction requested due to the project's proximity to the Transit Station and density bonus incentive for the affordable units. A Minor Use Permit would be required to allow for a parking reduction.

Pedestrian Circulation

Sidewalks would be provided along the Enterprise Drive and Willow Street frontages. A system of sidewalks would be provided throughout the project development and each unit would have direct access to a short walking path that connects to the internal sidewalk system. The proposed project would include walkways and crosswalks that would lead to the Transit Station area via Enterprise Drive and Willow Street and connect to off-site sidewalks along the south side of Enterprise Drive.

Fire Access

The minimum width available for driving or turning movements throughout the project site would be 21 feet in the courts throughout the development. The neighborhood streets would be at least 27 feet wide. The project roadway and neighborhood design meet City standards and would provide adequate turning radii and drive areas for fire engines and other emergency vehicles.

Infrastructure

Grading and Drainage

The entire 22.1-acre project site would be disturbed during site preparation and grading. In preparing the site for construction, approximately 42,000 sf of concrete and 296,000 sf of asphalt remaining on the project site would be demolished and removed. Any remaining debris and vegetation within the area to be disturbed would be cleared, and the site would be graded. Site grading and preparation would produce approximately 22,100 cubic yards of cut, although approximately 99,800 cubic yards of fill would be required. Therefore, approximately 77,700 cubic yards of clean soil would be imported to attain the minimum elevation for lots required by the City of Newark. Imported fill material will be subject to an evaluation by a Geotechnical Engineer prior to its use, and the properties of the soil with respect to corrosivity will also be evaluated.

Existing conditions at the project site include approximately 338,000 sf of concrete and asphalt, and the project site is currently considered to be 63.8 percent pervious pre-project. After project construction, approximately 74.6 percent of the project site would be developed with impervious surfaces, consisting of building foundations, parking lots, and paved areas. Approximately 25.4 percent of the site would be

pervious areas that include the drainage management areas (DMAs), natural self-treating areas, and other green areas. The project site would be graded to achieve 0.5 to two percent slope. Manufactured slopes would be constructed with a maximum 2:1 gradient.

A portion of the project site along the western boundary is within a mapped Federal Emergency Management Agency (FEMA) 100-year Special Flood Hazard Area, Zone AE with a base flood elevation of 11 feet (NAVD 88) (or 8.24 feet NGVD 29) (FEMA 2021). The proposed project design conforms with associated applicable City requirements for construction in flood hazard areas, which require that: (1) residential structures should be elevated to or above the base flood elevation or to a minimum of six inches above the building pad which shall be at a minimum elevation of 11.25 feet (NGVD 29) and (2) the top of curb grades for new residential streets within the noted AE Zone exhibit a minimum elevation of 10 feet (NGVD 29). Based on the noted requirements and related project design conformance, all developed portions of the project site would be elevated above the mapped 100-year floodplain.

An LID storm drain system comprised of bio-retention areas, curbs and gutters along the roadways, and underground storm drainpipes would be installed as part of the proposed project storm water management plan (CBG 2021). The grading described above would delineate the site into 50 DMAs with approximately 23,024-sf of bioretention treatment areas proposed within the project site.

Water Supply

The Alameda County Water District (ACWD) would supply water to the proposed project, as described in the Specific Plan PEIR and the associated Water Supply Assessment. Twelve-inch diameter water mains would be installed throughout the northern and southern portions of the development and cross the Hetch Hetchy ROW underground within the existing utility easement. The proposed 12-inch water main in the northern portion of the development would tie into the existing 12-inch water main in Willow Street and in Enterprise Drive from Court 4 in the southern portion of the development. However, the final determination of the proposed water line sizes would come from ACWD during their plan check review. The ACWD indicated in the adopted Water Supply Assessment for the Specific Plan PEIR that demand associated with the Specific Plan would be consistent with its planning assumptions and is included in its forecast and water supply planning (ACWD 2010).

Sanitary Sewer

The Union Sanitary District would provide sanitary sewer service for the project site. Eight-inch diameter sanitary sewer lines would be installed in the main and ancillary roadways throughout the project site, and wastewater would gravity-flow off-site to the east. The proposed sewer lines in the southern portion of the project site would connect to an existing 10-inch sewer main in Enterprise Drive (which eventually connects to an existing 36-inch sewer main in Willow Street), and the northern portion of the proposed project would connect directly to the existing 36-inch gravity sewer main in Willow Street, which ultimately connects to additional existing gravity mains and flows to the Newark Pump Station near the northwest corner of the Specific Plan area. Wastewater from the Newark Station is then pumped approximately 5 miles to the north to the Alvarado Treatment Plant.

Construction and Phasing

The project would be constructed in two phases. Phase 1 would consist of the construction of PA1, PA2, PA3, 66 DU in PA4, and the community building (3,600 sf of retail, 344 residential DU, and 1,485 sf community building). Construction of Phase 1 would commence in April 2023 and be completed in approximately 30 months (September 2025). Phase 2 would consist of the remaining 26 DU in PA4 and the Grand Park. Construction of Phase 2 would commence with grading as early as August 2023 and is anticipated to be complete by December 2025 but could be completed as early as October 2025 (27 months). Phase 2 construction activities would overlap the Phase 1 construction activities.

Approximately 12,680 tons of old asphalt and concrete (338,000 sf) would be exported during site preparation and approximately 77,700 cubic yards of soil would be imported during grading (total grading approximately 22,100 cubic yards of cut and 99,800 cubic yards of fill) to raise the building pad elevations.

Environmental Remediation and Mitigation

The project site has a history of soil and groundwater contamination associated with previous industrial land use, as chemicals were manufactured and stored on-site from 1942 to 1995. The previous land use resulted in adverse impacts to the site's soil and the groundwater beneath the site.

Soil Remediation

Soil remediation on the project site began in 2002 in a small area in the northeast corner of the project site containing phosphorus impacted soils. Remediation in this area involved isolation using an asphalt cap (P4 Cap). Soil remediation continued in May of 2015 in accordance with Work Order No. R2-2015-0017 by the San Francisco Regional Water Quality Control Board (RWQCB). Following soil removal activity and P4 cap construction, FMC Corporation submitted a Risk Management Plan (RMP) to the RWQCB in August of 2019 (ERM 2019). The RMP was developed to manage and set procedures for any unexpected threats from soil or groundwater during future site development. The RMP provides for long term protection, inspection, monitoring, and maintenance of the P4 Cap. The RMP was approved in September of 2019 (SWRCB 2020). In December of 2019, the asphalt cap was removed and replaced by a reinforced concrete cap. The new cap, which consists of an 8-inch steel-reinforced concrete cap installed over 24-inch minimum compacted subgrade material and a witness layer, was completed in January 2020 (ERM 2021). FMC, the former property owner of the Willow area, is responsible for site investigation and remediation prior to turning over portions of the site to new owners. FMC is responsible for ensuring that the inspections, maintenance, and reporting required in the operations and maintenance plan are completed by qualified personnel.

Remediation of soils on the remainder of the project site was completed between August 2019 and November 2019, in which all excavated areas were backfilled with approved clean imported material to grades specified in approved workplans. A letter from the RWQCB dated November 27, 2019, stated that concentrations of chemicals in soils at the Willow Parcel soils had reached acceptable risk based cleanup levels and no further remedial action was necessary within the Willow Area (RWQCB 2019).

Remediation of soils on the previously approved Grand Park portion of the project site was conducted between January and October 2020. FMC Corporation submitted a Soil and Shallow Groundwater

Remedial Action Completion Report – Phase 1 Area to the San Francisco Bay RWQCB on February 5, 2021, that addressed the Grand Park area (referred to as the Park Redevelopment Area) in the report. The report requests that the San Francisco Bay RWQCB approve the completion of the Phase 1 Area work and issue a No Further Active Remediation for soil letter for this portion of the project site. The San Francisco Bay RWQCB issued a Report Acceptance letter on April 16, 2021, stating that the agency has no concerns with the remedial activities that were performed but prefers not to make a formal determination on further remedial action until all remedies for the Park Redevelopment Area are complete (SWRCB 2021). Soil remediation activities within the Park Redevelopment Area are ongoing.

Groundwater Remediation

FMC Corporation submitted a Shallow Groundwater Interim Remedial Action Completion Report to the San Francisco Bay RWQCB on June 1, 2020, for the FMC Willow portion of the project site (ERM 2020). Based on the documentation presented in the report, FMC requested that the RWQCB approve the Interim Remedial Action Completion Report and concur that the shallow groundwater Interim Remedial Action is complete for the affected area (including the FMC Willow portion of the project site). Groundwater remediation activities in the Willow and Park Redevelopment areas are ongoing.

4.0 REQUIRED APPROVALS

A listing and brief description of the regulatory permits and/or approvals required to implement the FMC Willow and Grand Park Project are provided below. This environmental document is intended to address the environmental impacts associated with the following discretionary actions and approvals:

City of Newark

- **Design Review**
- **Specific Plan Amendment** from Commercial/Retail, Commercial/Office, High Density Residential, Transit Station, Parks & Recreational Open Space to Commercial Mixed Use, Medium/High Density Residential, Transit Station, Restricted Use Areas and Parks & Recreational Open Space.
- **General Plan Amendment** from Community Commercial, High Density Residential, Parks and Recreational Facilities, and Public Institutional to Medium Density Residential, Commercial Mixed Use, Public Institutional, and Parks and Recreational Facilities.
- **Zoning Map Amendment** from Business and Technology Park and Park to Medium Density Residential - Form Based Code, Commercial/Mixed Use - Form Based Code, Transit Station, Public Facilities, and Park.
- **Vesting Tentative Subdivision Map**
- **Density Bonus Incentive**
- **Minor Use Permit** for parking reduction**.**
- **Consideration of the Environmental Document:** The Newark City Council will act as the lead agency as defined by CEQA and will have authority to determine if the environmental document is adequate under CEQA and the State CEQA Guidelines.
- **Project Approval:** The Newark City Council will consider approval of the project and the entitlements described above.

Agencies

- **ACWD:** Site plan review of proposed water infrastructure.
- **San Francisco Bay Regional Water Quality Control Board (RWQCB):**
    - No Further Remedial Action for soil and groundwater for the Park Redevelopment Area.
    - No Further Remedial Action for groundwater for the Willow Redevelopment Area.
- **USD:** Site plan review of proposed wastewater infrastructure.

5.0 PREVIOUS RELEVANT ENVIRONMENTAL ANALYSIS

A PEIR was prepared for the Specific Plan, pursuant to the 1992 City of Newark General Plan. The Specific Plan required that the General Plan be amended to incorporate the proposed Specific Plan and its allowable land uses, development regulations, design guidelines, and infrastructure improvements. The City adopted an updated General Plan in December 2013 and the Final PEIR (State Clearinghouse No. 2013012052) addressing the General Plan was published in October 2013. These documents have incorporated the Specific Plan, of which the FMC Willow and Grand Park project is included. The Specific Plan PEIR evaluated the potential impacts of the implementation of the entire Specific Plan, including the development of the FMC Willow and Grand Park project site.

Incorporation of the Previous Relevant Environmental Analysis

The EIRs for the City of Newark 2013 Draft Updated General Plan and the Specific Plan are comprehensive documents. These documents provide important context to understanding the environmental analyses that have occurred to date with respect to development in the City of Newark and Specific Plan, therefore, both documents are hereby incorporated by reference pursuant to State CEQA Guidelines Section 15150.

Evaluation of the FMC Willow and Grand Park Project

This Initial Study evaluates whether the environmental effects of the currently proposed FMC Willow and Grand Park project were adequately addressed in the Specific Plan PEIR. For impacts that were adequately addressed, this IS provides a cross-reference to the relevant discussion in the PEIR. Impacts specific to the FMC Willow and Grand Park project that were not fully addressed in the Specific Plan PEIR are evaluated in detail in this document. This Initial Study also identifies whether changes have occurred to the project or circumstances since the PEIR was certified that require additional analysis in this document.

In January and February 2019, the City Council approved a zoning amendment to rezone the previously proposed, 5-acre Grand Park site from Business and Technology Park (BTP) to Park (PK). With the approval of this project, the easternmost boundary line of the proposed park site would be shifted farther east as part of the proposed FMC Willow and Grand Park project while its northeastern corner would be adjusted to the southwest, and the total size of the proposed Grand Park would remain at five acres. Therefore, the areas of the Grand Park site that are currently zoned for BTP would need to be rezoned by the City to allow for parks and recreational open space use and that action is evaluated in this Initial Study.

Mitigation measures contained in the Bayside Newark TOD Specific Plan Mitigation Monitoring and Reporting Program (MMRP) relevant to the proposed project have been identified and summarized in this Initial Study and are included in Appendix A.

6.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that may require mitigation to reduce the impact from "New Significant Impact" to "Less than Significant with Project-level Mitigation Incorporated" as indicated by the checklist on the following pages.

An Initial Study is conducted by a Lead Agency to determine if a project may have a potentially significant effect on the environment (CEQA Guidelines Section 15063). An EIR must be prepared if an Initial Study indicates that further analysis is needed to determine whether a significant impact will occur or if there is substantial evidence in the record that a project may have a significant effect on the environment (CEQA Guidelines Section 15064(f)).

☐ Aesthetics	☐ Agriculture/Forestry Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Greenhouse Gas Emissions	☐ Hazards/Hazardous Materials	☐ Hydrology/Water Quality
☐ Land Use/Planning	☐ Mineral Resources	☐ Noise
☐ Population/Housing	☐ Public Services	☐ Recreation
☐ Transportation	☐ Utilities/Service Systems	☐ Mandatory Findings of Significance

7.0 DETERMINATION

On the basis of this initial evaluation:

■	I find that the proposed project COULD NOT have a significant effect on the environment, and an ADDENDUM will be prepared.
☐	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
☐	I find that the proposed project MAY have a significant effect on the environment, and an environmental impact report is required.
☐	I find that the proposed project MAY have a "potential impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect I) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
☐	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name:

For:

8.0 ENVIRONMENTAL INITIAL STUDY CHECKLIST

Pursuant to CEQA Guidelines Section 15162, responses to the following questions and related discussion indicate if the proposed project will have or will potentially have a significant adverse impact on the environment, either individually or cumulatively with other projects. All phases of project planning, implementation, and operation are considered. Mandatory Findings of Significance are discussed in Section 8.XVIII below.

A. "New Significant Impact" is appropriate if there is substantial evidence that an effect may be significant that was not previously identified as a significant impact in the Specific Plan PEIR. If there are one or more "New Significant Impact" entries when the determination is made, an EIR is required.

B. "Less Than Significant with Project-level Mitigation Incorporated" applies where the incorporation of project-level mitigation measures (not including mitigation measures identified in the Specific Plan PEIR) are required to reduce an effect from "New Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level.

C. "Less Than Significant Impact" applies where the project creates no significant impacts, only less than significant impacts.

D. "No New Impact" applies where a project does not create a new significant impact or result in a substantial increase in the severity of the impact identified in the Specific Plan PEIR for that category. Applicable mitigation measures from the Specific Plan PEIR will be cross-referenced and applied as appropriate.

I. AESTHETICS

		New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Except as provided in Public Resources Code Section 21099, would the project:					
a)	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	■
b)	Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	■
d)	Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	■

Environmental Setting

The project site is vacant following soil remediation that removed industrial contaminants that were remnants of prior uses. Terrain on the project site and surrounding area has been altered for industrial development, and most existing topographic relief is the result of fill for the railroad and industrial pads, excavation of artificial basins and channels, and diking of tidelands. The project site consists of leveled industrial pads, asphalt roads, and railroad embankments. Elevations on the project site are between approximately nine feet and twelve feet (NGVD29) from west to east. Terrain in the area surrounding the project site is primarily flat.

The project site is bordered by the SamTrans railroad corridor to the north, the approved Harbor Pointe residential development to the west, Enterprise Drive and planned mixed use developments to the south, and Willow Street to the east. The Hetch Hetchy pipeline ROW, owned and operated by the SFPUC, transects the project site (see Figures 3 and 4 for the site plan and design). Part of the Don Edwards San Francisco Bay National Wildlife Refuge is approximately 1,000 feet northwest of the project site, on the other side of the existing railroad tracks. The surrounding land uses are characterized by existing and former industrial parcels, railroad, and mixed-use development.

Due to the relatively flat terrain and few trees bordering the site, the site is within the viewshed of the nearby residential areas and motorists on Willow Street, Enterprise Drive, and Hickory Street. However, views of the project site are currently screened by chain link fencing with slats. Additionally, vacant lots that lie between the project site and existing residential development are planned for development within the Specific Plan area.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Visual resources (i.e., aesthetics) are discussed in Chapter 4.1 of the PEIR prepared for the Specific Plan (RBF 2011). The PEIR concluded that construction of the project would alter the existing views by

replacing primarily vacant, disturbed land with urban development, but the development would be consistent with the character of the surrounding development. Further, the Specific Plan contains Site and Architecture Design Guidelines intended to achieve a mixed-use community with a consistent quality and distinct sense of space. Development in the Specific Plan area would be required to comply with the development regulations and design guidelines contained in the Specific Plan to ensure that the development is of quality design and is consistent with the City of Newark 2013 Draft Updated General Plan. No impacts relating to visual resources/aesthetics were identified in the PEIR, and therefore no mitigation measures were required.

Evaluation of Aesthetics

a) Have a substantial adverse effect on a scenic vista?

No New Impact. Neither the project site, nor views to or from the project site, have been designated as an important scenic vista by the City of Newark or any other public agency. Therefore, construction of the proposed development would not interfere with or degrade a scenic vista. Impacts would be less than significant, and no new impact would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No New Impact. There are no State or locally designated scenic highways in the vicinity of the proposed project site (Caltrans 2021). Therefore, implementation of the proposed would not adversely affect scenic resources within a designated scenic highway, and impacts would be less than significant. No new impact would occur.

c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings?

No New Impact. The existing visual character of the area surrounding the project site is defined by the vacant lots of former industrial land uses and ongoing construction and development. The project site is vacant and largely barren. Implementation of the project would result in the construction of a 370-unit multi-family community including a mixed-use area with 3,600 sf of retail and 90 affordable units (plus one manager unit), a 5-acre community park (Grand Park), and a 1,485-sf community building, along with approximately 1.8 acres set aside for a future transit station. Additional proposed site improvements include on- and off-street parking, open space and common areas, drive aisles, LID drainage and water quality treatment structures, lighting, sidewalks, and landscaping. The proposed project would alter the existing visual character to a more community-focused, urban development visual character than is currently experienced by viewers. While the proposed project would result in a change in visual character on-site, the proposed project has been designed to be consistent with the Site and Architecture Design Guidelines contained in the Specific Plan and is expected to integrate with the planned and existing Specific Plan area and surrounding land uses. Impacts to the visual character of the area would be less than significant, and no new impact would occur.

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

No New Impact. Any new lighting associated with development within the Specific Plan area, including the project site, would be subject to the lighting standards in the Site and Architecture Design Guidelines contained in the Specific Plan. These guidelines contain lighting standards for 1) exterior illumination for streetlights and fixtures; 2) path and stair lighting; 3) building mounted lights; 4) accent lighting; and 5) special event lighting. These guidelines are developed to minimize light spillover and glare to adjacent areas. Compliance with those guidelines would ensure that the proposed project does not introduce substantial light and glare that may pose a hazard or nuisance or result in night sky illumination. Because the project design would comply with the Specific Plan Site and Architecture Guidelines to limit light spillover and intensity, impacts would be less than significant, and no new impact would occur.

II. AGRICULTURE AND FORESTRY RESOURCES

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	■
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	■
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	☐	☐	☐	■
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non- forest use?	☐	☐	☐	■

Environmental Setting

No agricultural activities or timber management occur on or near the project site, and the project site is not designated for those land uses. The California Important Farmland Finder Interactive Map prepared pursuant to the Farmland Mapping and Monitoring Program of the California Department of Conservation classifies the project site as urban and built-up land, and immediately adjacent areas are also urban and built-up land and other land (CDC 2021). Urban and built-up land is defined by the California Department of Conservation as land occupied by structures or infrastructure with a building density of at least one unit to one and one-half acres, or approximately six structures to a 10-acre parcel. Other land is defined by land that is not included in any other category, which includes areas not suitable for agricultural uses (CDC 2021).

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

As discussed in Chapter 1.2 of the PEIR prepared for the Specific Plan, agriculture/forestry resources issues were not addressed in the PEIR because it was determined based on substantial evidence that the project would have no impacts to agriculture/forestry resources (RBF 2011).

Evaluation of Agriculture and Forestry Services

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No New Impact. Because no agricultural resources or activities exist on the project site, no new impact would occur for questions a) and b).

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

No New Impact. Because no portions of the City are zoned for forest land, timberland, or zoned Timberland Production, and the project site is not zoned nor used for agriculture, no new impact would occur for questions c), d), and e).

III. AIR QUALITY

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	■
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	■
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	■
d) Expose sensitive receptors to substantial pollutant concentration?	☐	☐	☐	■
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	■

Environmental Setting

The potential air quality impacts associated with implementation of the Specific Plan were evaluated in Chapter 4.2 of the PEIR. Additionally, a project-specific air quality evaluation was completed as part of the Air Quality and Greenhouse Gas Emissions Technical Report for the FMC Willow and Grand Park Project, included as Appendix B to this Initial Study (HELIX 2021a). The results of the air quality evaluation are summarized below.

Climate / Meteorology

The project site is located within the San Francisco Bay Area Air Basin (SFBAAB) in the western portion of Alameda County. The SFBAAB comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County.

Temperature inversion layers (inversions; layers of warmer air over colder air) affect air quality conditions because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). There are two types of inversions that occur regularly in the SFBAAB, and the highest air pollutant concentrations in the SFBAAB generally occur during inversions. Frequent occurrences of elevated inversions in summer and fall months act to cap the mixing depth, limiting the depth of air available for dilution. Elevated inversions are caused by subsiding air from the subtropical high-pressure zone, and from the cool marine air layer that is drawn into the SFBAAB by the heated low-pressure region in the Central Valley. The inversions typical of winter, called radiation inversions, are formed as heat quickly radiates from the earth's surface after sunset, causing

the air in contact with it to rapidly cool. Radiation inversions are strongest on clear, low-wind, cold winter nights, allowing the build-up of such pollutants as carbon monoxide and particulate matter. Mixing depths under these conditions can be as shallow as 50 to 100 meters, particularly in rural areas.

There are 11 climatological subregions within the SFBAAB, and the project site is in the Southwestern Alameda County climatological subregion of the air basin. This subregion encompasses the southeast side of San Francisco Bay, from Dublin Canyon to north of Milpitas. The subregion is bordered on the east by the East Bay hills and on the west by the bay. This climate of this subregion is affected by its proximity to San Francisco Bay and, to a lesser extent, by marine air entering through the Golden Gate. The bay cools the air during warm weather and during cold weather the bay warms the air. The normal northwest wind pattern carries this air onshore during the daytime and draws air from the land offshore at night. Winds are predominantly out of the northwest during the summer months. In the winter, winds are equally likely to be from the east. Wind speeds are moderate in this subregion, with annual average wind speeds close to the bay at about 7 miles per hour. During the summer months, average maximum temperatures are in the mid-70s degrees Fahrenheit (°F). Average maximum winter temperatures are in the high 50s to low 60s °F. Average minimum temperatures are in the low 40s °F in the winter and the mid-50s °F in the summer. Pollution potential is relatively high in this subregion during the summer and fall, and moderate during the winter. Air pollution sources include light and heavy industry, and motor vehicles (BAAQMD 2017a).

Air Quality Regulatory Framework

The United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards for common pollutants. The Bay Area Air Quality Management District (BAAQMD) is responsible for implementing emissions standards and other requirements of federal and state laws in the SFBAAB. As required by the California Clean Air Act, BAAQMD has published Clean Air Plans and adopted rules and regulations to limit the emissions that can be generated by various uses and/or activities to bring the SFBAAB into compliance with the federal and state ambient air quality standards.

Criteria Air Pollutants

Criteria pollutants, defined by state and federal law as a risk to the health and welfare of the general public, include the following compounds:

- Ozone (O_3)
- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Particulate matter (PM), which is further subdivided:
  - Coarse PM, 10 micrometers or less in diameter (PM_{10})
  - Fine PM, 2.5 micrometers or less in diameter ($PM_{2.5}$)
- Sulfur dioxide (SO_2)
- Lead (Pb)

Criteria pollutants can be emitted directly from sources (primary pollutants; e.g., CO, SO_2, PM_{10}, $PM_{2.5}$, and lead), or they may be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere (secondary pollutants; e.g., ozone, NO_2, PM_{10}, and $PM_{2.5}$). Note that PM_{10} and $PM_{2.5}$

can be both primary and secondary pollutants. The principal precursor pollutants of concern are reactive organic gases ([ROGs] also known as volatile organic compounds [VOCs])[1] and nitrogen oxides (NO_X).

Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe, and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is known as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter (CARB 2018a). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a significant impact on California's population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2018a).

Ambient Air Quality Standards

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe, to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. The EPA has established national ambient air quality standards (NAAQS) for several air pollution constituents. As permitted by the Clean Air Act, California has adopted more stringent air emissions standards (CAAQS) and expanded the number of regulated air constituents.

The CARB is required to designate areas of the state as attainment, nonattainment, or unclassified for any state standard. An "attainment" designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A "nonattainment" designation indicates that a pollutant concentration violated the standard at least once. The area air quality attainment status of the BAAB, including the City of Newark, is shown in Table 2.

[1] CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.

TABLE 2.
SAN FRANCISCO BAY AREA AIR BASIN ATTAINMENT STATUS

Pollutant	State of California Attainment Status	Federal Attainment Status
Ozone (1-hour)	Nonattainment	No Federal Standard
Ozone (8-hour)	Nonattainment	Nonattainment (marginal)
Suspended Particulate Matter (PM_{10})	Nonattainment	Attainment/Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment (moderate)
Carbon Monoxide	Attainment	Attainment/Unclassified
Nitrogen Dioxide	Attainment	Attainment/Unclassified
Lead	Attainment	Attainment/Unclassified
Sulfur Dioxide	Attainment	Attainment/Unclassified
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

Sources: BAAQMD 2017a; CARB 2018b.

Monitored Air Quality

The BAAQMD operates a network of ambient air monitoring stations throughout the SFBAAB. The air quality monitoring station most representative of conditions at the project site is the Hayward-La Mesa Monitoring Station, approximately 18 miles north of the project site. The Hayward-La Mesa Station only monitors ozone. Data for the other criteria pollutants were obtained from the San Jose-Jackson Street Monitoring Station, approximately 15 miles southeast of the project site. The are no monitoring stations in the SFBAAB for SO_2 or lead. The ambient pollutant concentrations collected at the stations during the last 3 available years (2018 through 2020) are shown in Table 3, *Air Quality Monitoring Data*. The data indicates exceedance of the state 1-hour ozone standard on 2 days in 2019 and 3 days in 2020, exceedance of the state and federal 8-hour ozone standard on multiple days in 2018 through 2020; exceedance of the PM_{10} standards on multiple days in 2018 through 2020; and exceedance of the federal $PM_{2.5}$ standard on multiple days in 2018 and 2020, but none in 2019. Data for NO_2 showed no exceedances from 2018 through 2020.

TABLE 3.
AIR QUALITY MONITORING DATA

Pollutant Standard	2018	2019	2020
Ozone (O_3) Hayward Monitoring Station			
Maximum 1-hour concentration (ppm)	0.075	0.106	0.116
Days above 1-hour state standard (0.09 ppm)	0	2	3
Maximum 8-hour concentration (ppm)	0.066	0.085	0.092
Days above 8-hour state standard (0.070 ppm)	0	2	5
Days above 8-hour federal standard (0.070 ppm)	0	2	4
Coarse Particulate Matter (PM_{10}) San Jose Monitoring			
Maximum 24-hour concentration ($\mu g/m^3$)	121.8	77.1	137.1
Estimated Days above state standard (50 $\mu g/m^3$)	12.2	11.8	29.9
Estimated Days above federal standard (150 $\mu g/m^3$)	0	0	0
Fine Particulate Matter (PM2.5) San Jose Monitoring Station			
Maximum 24-hour concentration ($\mu g/m^3$)	133.9	27.6	120.5
Estimated Days above federal standard (35 $\mu g/m^3$)	15.5	0	12.0
Nitrogen Dioxide (NO_2) San Jose Monitoring Station			
Maximum 1-hour concentration (ppb)	86.1	59.8	51.9
Days above state 1-hour standard (180 ppb)	0	0	0

Source: CARB 2021.
ppb = parts per billion; ppm = parts per million; µg/m3 = micrograms per cubic meter.

Methods

Construction Emissions

Criteria pollutant and precursor emissions from the project's construction activities were calculated using CalEEMod, version 2020.4.0. CalEEMod is a computer model used to estimate air emissions resulting from land development projects throughout the state of California. CalEEMod was developed by CAPCOA in collaboration with the California air quality management and pollution control districts, primarily the South Coast Air Quality Management District (SCAQMD). CalEEMod utilizes emission factors from CARB's OFFROAD and EMFAC models for off-road equipment and on-road vehicles, respectively. The calculation methodology, source of emission factors used, and default data is described in the CalEEMod User's Guide Appendices A, D, and E (CAPCOA 2021).

Based on a conservative estimate (earliest and highest intensity of construction activities) of the project construction timeline provided by the project applicant, Phase 1 construction would begin in April 2023 and be completed in September 2025 for a total construction period of 30 months. Construction of Phase 2 buildings would commence in August 2023 and could be completed as early as October 2025 (27 months). Phase 2 construction would overlap the Phase 1 construction period. However, each work crew and their equipment would start Phase 2 construction at the conclusion of their respective Phase 1 activity (there would be no duplication of construction equipment or work crews between Phase 1 and Phase 2). For construction modeling purposes, all Phase 2 construction activities which occur concurrently with Phase 1 construction are included in the Phase 1 construction model, including grading for the Grand Park. Phase 2 construction modeling only includes the unfinished portion of building construction and architectural coatings.

Construction activities would include demolition, grading and installation of underground utilities, paving, construction of structures, and architectural coating (e.g., painting). Grading includes site preparation (e.g., grubbing and clearing) using the same equipment. During demolition, an export of approximately 12,680 tons of old concrete/asphalt is anticipated. During grading, an import of approximately 77,700 cubic yards of soil is anticipated. Construction would require heavy equipment during demolition, grading, underground utilities, paving and building construction. Construction equipment estimates are based on information provided by the project applicant/engineer and on default values in CalEEMod.

The modeled mitigated construction emissions assume implementation of the BAAQMD basic construction measures, specifically watering exposed areas twice per day and limiting vehicle speeds on unpaved surfaces to 15 miles per hour (mph), as required by the Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-1a and 4.2-1b. The modeled construction emissions also assume implementation of the Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-1b which requires the use of USEPA Tier 4 diesel engine standards for off-road construction equipment with more than 50 horsepower (hp).

Operation Emissions

Criteria pollutant and precursor emissions from long-term operation of the project were estimated using CalEEMod. Operational emissions include area sources, energy sources (on-site energy use), and mobile sources (vehicle trips). Area sources include landscape equipment, consumer products, architectural coatings (e.g., paint), and hearths (e.g., fireplaces, woodstoves). No hearths (including woodstoves and fireplaces) are included in the design of the proposed project. On-site energy source emissions would be from the use of natural gas for appliances and heating and were estimated using CalEEMod defaults. Emissions associated electricity use and the project requirement for solar electricity generation (in accordance with California Title 24 building energy requirements) are analyzed in Section 8.VII, *Greenhouse Gas Emissions*. The emissions from mobile sources were calculated using the project average daily trips (ADT) estimate of 1,824 trips after internalization reductions (Fehr & Peers 2021) and CalEEMod default trip lengths. However, it is to be noted that the trip generation analysis used older project data that assumed more residential units (377) and retail space (12,100 SF) than the proposed project. Trip generation rates used in the modeling were calculated from the trip generation data. The trip generation rates include trip reductions for internalization. Therefore, no pass-by or linked trip reductions were included in the modeling.

Impacts to New Sensitive Receptors

The project would site new sensitive receptors near the proposed transit station and train tracks. For the purposes of this study, it is assumed that the Bayside Newark Rail Corridor passenger rail will be constructed in the future and include a transit stop near the project site as planned. Therefore, a health risk assessment (HRA) was completed to estimate the potential risks to future residents for exposure to DPM from potential future trains traveling on the tracks and idling at the transit station platform. The PEIR assumed six commuter rail trains per day would eventually use the corridor and stop at the transit station platform. Since the PEIR was certified, the Bayside Newark Transportation Corridor Study (DTCS) was released in August 2017. This study analyzed 10 transportation alternatives ranging from improvements to existing highways and highway bridges to new tracks and rail bridges that would connect to the Caltrain commuter rail system in Redwood City and continue to San Francisco (San Mateo County Transit District 2017). Environmental review of the DTCS is in progress at the time of this

analysis, and no preferred alternative from the DTCS has been publicly identified. The HRA was completed for two scenarios. The first scenario analyzed is the 6 trains per day assumed in the PEIR, assuming diesel locomotives pulling passenger cars similar to existing diesel trains in use by Caltrain. The second scenario analyzed is the maximum anticipated rail traffic scenario in the DTCS, which would use diesel or electric multiple-unit trains (self-propelled trains, no locomotives). The earliest anticipated train service in the DTCS would start in 2028.

Emissions factors from the USEPA fact sheet *Emission Factors for Locomotives* (2009) were used to estimate potential future DPM emissions in the project vicinity for the two train scenarios. Localized concentrations of pollutants were modeled using the Lakes AERMOD View version 9.8.3. The Lakes program utilizes the USEPA's AERMOD gaussian air dispersion model. Discrete receptors were placed in the model at estimated representative locations of ground level outdoor spaces for the five closest townhome residential buildings facing the train tracks, and the closest second floor affordable housing unit to the train tracks. Health risks resulting from localized concentration of DPM were estimated using the CARB Hotspots Analysis and Reporting Program (HARP), Air Dispersion Modeling and Risk Tool (ADMRT) version 19121. The plot files of localized concentrations from AERMOD were imported into the ADMRT model to determine health risks. The ADMRT conservatively assumes that residents would be standing and breathing on the apartment balconies every day between 17 and 21 hours per day (depending on the age group, starting with fetuses in utero in the third trimester of pregnancy) for 30 years.

Levels of Significance

The BAAQMD has adopted thresholds which lead agencies can use to determine the significance of a development project's short-term construction and long-term operational pollutant emissions. The BAAQMD's 2017 thresholds of significance for criteria pollutant and precursors are shown in Table 4, *BAAQMD Significance Thresholds* (BAAQMD 2017a).

TABLE 4.
BAAQMD SIGNIFICANCE THRESHOLDS

Pollutant	Construction	Operation	
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Maximum Annual Emissions (tons/year)
Reactive Organic Gasses (ROG)	54	54	10
Nitrogen Oxides (NO_X)	54	54	10
Particulate Matter Exhaust (PM_{10})	82	82	15
Fine Particulate Matter Exhaust ($PM_{2.5}$)	54	54	10
PM_{10} and $PM_{2.5}$ Fugitive Dust	BCMMs[1]	none	none
Local Carbon Monoxide (CO)	none	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	
Sulfur Oxides (SO_X)	none	none	none

Source: BAAQMD 2017a.
ppm = part per million; BCMMs = Basic Construction Mitigation Measures
[1] For construction fugitive dust, rather than a numeric threshold BAAQMD recommends that lead agencies consider projects which implement the Basic Construction Mitigation Measures to have a less than significant impact related to fugitive dust.

For construction fugitive dust, rather than a numeric threshold, BAAQMD recommends that lead agencies consider projects which implement the Basic Construction Mitigation Measures (BCMMs) to have a less than significant impact related to fugitive dust (BAAQMD 2017b). The Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-1a requires implementation of the BCMMs.

For cancer risks to sensitive receptors as a result of TAC emissions, the BAAQMD has adopted a threshold: any project that has the potential to directly impact a sensitive receptor and results in an increased risk from cancer greater than 10 in 1 million would have a potentially significant impact (BAAQMD 2017a).

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Air Quality is discussed in Chapter 4.2 of the PEIR prepared for the Specific Plan. The PEIR concluded that implementation of the Specific Plan could have potentially significant adverse air quality impacts and includes measures to reduce impacts to less than significant.

The PEIR concluded that, due to the extent of the development allowed under the Specific Plan and the amount of earthwork that would be involved, construction emissions have the potential to violate Federal and State ambient air quality standards. Implementation of the Bayside Newark TOD Specific Plan PEIR Mitigation Measures 4.2-1a and 4.2-1b would require implementation of BAAQMD's BCMMS and BAAQMD's "additional construction mitigation measures." Implementation of Bayside Newark TOD Specific Plan PEIR Mitigation Measures 4.2-1a and 4.2-1b would reduce short-term construction emissions of criteria pollutants to a less than significant level.

The PEIR concluded that the Specific Plan would be consistent with the then current air quality plan and that consistency with the 2010 Clean Air Plan control measures would ensure that the Specific Plan would not result in cumulatively considerable air quality impacts in the SFBAAB. Impacts from pollutant emissions resulting from long-term operation of the Specific Plan (including criteria pollutants and precursors, localized carbon monoxide, and odors) would be less than significant.

The PEIR concluded that impacts on new sensitive receptors from existing permitted TAC sources would be less than significant. However, the PEIR concluded that sensitive receptors within the plan area in proximity to the future Bayside Newark Rail Corridor and Transit Station could be exposed to significant levels of DPM from trains. Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-2 requires a health risk analysis for new residences located with 1,000 feet of the proposed Transit Station, and appropriate filtered air supply systems for any new residences determined to have health risks above the BAAQMD thresholds.

Evaluation of Air Quality

a) Conflict with or obstruct implementation of the applicable air quality plan?

No New Impact. Consistency with the air quality plan is determined by whether the project would hinder implementation of control measures identified in the air quality plan or would result in growth of population or employment that is not accounted for in local and regional planning. The BAAQMD's Clean Air Plan is the applicable air quality plan for the SFBAAB and the City. Since the PEIR was certified in

2010, the BAAQMD's 2010 Clean Air Plan was superseded by the 2017 Clean Air Plan, adopted on April 19, 2017 (BAAQMD 2017c).

Implementation of the project would result in the construction of 370 residential units, approximately 3,600 sf of retail space, and the Grand Park. The City of Newark zoning designation is BTP for the project site, which is inconsistent with the proposed land uses for the project. Therefore, an amendment to the zoning map is required to rezone the project site to allow for medium density residential-form based code (MDR-FBC), commercial mixed use-form based code (CMU-FBC), transit station (TS), Public Facilities (PF), and Park (PK).

The Specific Plan allows for an adjustment of land uses within the Specific Plan area without necessitating a Specific Plan Amendment as long as the total gross acreage of a land use planning area does not change by more than 20 percent from the original gross acreage approved under the Specific Plan and the net increase does not exceed the total DU permitted by the Specific Plan (2,500 units). As of June 2022, a total of 2,171 DU have been approved or are pending approval in the Specific Plan area, including the proposed FMC Willow and Grand Park project (see Table 1 in Section 2.0) which is below the 2,500 DU threshold. However, the proposed project would change the total gross acreage of a land use planning area by more than 20 percent from the original gross acreage approved under the Specific Plan by eliminating commercial/office and high density land uses and reducing commercial/retail land uses for medium density residential. The project's mixed-use development and location is consistent with the Specific Plan's intent for TOD, and the project site's regional designation as a Priority Development Area. Therefore, the project would be consistent with the local and regional growth assumptions used in developing the 2017 Clean Air Plan.

As described in the 2017 Clean Air Plan, the 2010 TCMs were carried forward into the 2017 Clean Air Plan, although the measure descriptions and numbering were updated. In addition, 8 of the 10 Mobile Source Measures (MSMs), all 6 of the Land Use Measures (LUMs), and all 4 Energy and Climate Measures (ECMS) from 2010 were carried forward into the 2017 plan (BAAQMD 2017c). The MSMs primarily address vehicles and their components as they relate to emissions and are not directly applicable to the project. The project would be required to comply with the building energy efficiency standards of 2019 Title 24 part 6, including the requirement for new residential building to install on-site photovoltaic (solar) electricity generation systems, and Title 24 part 11 (CALGreen). The Title 24, part 6 residential solar requirement is discussed further in Section 8.VII, *Greenhouse Gas Emissions*, below. Therefore, the project would not conflict with or obstruct implementation of the 2017 Clean Air Plan and the impact would be less than significant and would not exceed the significance of the impact in the PEIR. No new impact would occur.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

No New Impact.

Construction Emissions. The results of the modeling of the project's construction emissions of criteria pollutants and precursors for Phases 1 and 2, and for the combined Phase 1 building construction, Phase 2 architectural coatings, and Phase 2 building construction (which would overlap) are shown in Table 5, *Unmitigated Maximum Daily Construction Emissions*. For informational purposes, the analysis provides the project-specific emissions without incorporation of required mitigation measures from the PEIR. The

data are presented as the maximum anticipated daily emissions for comparison with the BAAQMD thresholds.

TABLE 5.
UNMITIGATED MAXIMUM DAILY CONSTRUCTION EMISSIONS

Construction Activity	ROG	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Phase 1 and 2 Demolition	5.2	56.4	39.2	0.1	19.8	2.1	3.2	1.9
Phase 1 and 2 Grading	8.1	94.3	57.8	0.2	20.4	3.4	7.8	3.1
Phase 1 and 2 Underground Utilities	1.9	15.9	18.6	0.0	0.2	0.7	0.1	0.6
Phase 1 and 2 Paving	3.4	20.9	24.3	0.1	0.7	0.8	0.2	0.8
Phase 1 Building Construction	9.5	74.2	86.1	0.2	3.8	3.5	1.0	3.4
Phase 1 Architectural Coating	28.1	1.4	3.5	0.0	0.6	0.1	0.2	0.1
Phase 2 Building Construction	7.4	61.4	77.4	0.1	1.2	2.6	0.3	2.5
Phase 2 Architectural Coatings	14.5	1.3	2.3	0.0	0.2	0.1	0.1	0.1
Concurrent Activities								
2023 Building Construction + Underground Utilities	10.7	84.0	103.4	0.2	4.0	3.7	1.1	3.5
2024 Building Construction + Paving	17.7	138.2	169.9	0.4	7.5	6.1	2.0	5.9
2025 Phase 1 Building Construction + Phase 1 Architectural Coating	31.5	22.3	27.8	0.1	1.3	0.9	0.3	0.8
2025 Phase 2 Building Construction + Phase 2 Architectural Coating	21.9	62.6	79.7	0.2	1.4	2.7	0.4	2.6
Maximum Daily Emissions	**31.5**	**132.8**	**169.9**	**0.4**	**7.5**	**6.1**	**2.0**	**5.9**
BAAQMD Thresholds	*54*	*54*	*none*	*none*	*BMPs*	*84*	*BMPs*	*54*
Exceed Thresholds?	***No***	***Yes***	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix B).

As shown in Table 5, unmitigated maximum daily emissions of ROG would occur concurrent with Phase 1 building construction and architectural coating. Maximum daily emissions of NO_X would occur during grading, and maximum daily emissions of constructional other pollutants would occur during concurrent 2023 building construction and underground utilities. Emissions of NO_X during Phase 1 grading would be 138.2 pounds per day and would exceed the BAAQMD threshold of 54 pounds per day. All other emissions would be below the BAAQMD thresholds. Bayside Newark TOD Specific Plan Mitigation Measure 4.2-1b (see below) from the PEIR requires implementation of the BAAQMD's "additional construction mitigation measures" which includes requirements for reductions of NO_X and exhaust PM and implementation of best available control technology for reduction of heavy-duty diesel engine emissions.

To meet the requirements of the Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-1b, modeling assumptions included use of off-road equipment on the project site with diesel engines with 50 or more HP to be USEPA Tier 4 certified or be retrofitted with equivalent CARB approved emissions reduction systems. Table 6, *Mitigated Maximum Daily Construction Emissions*, shows the mitigated construction emissions for Phase 1 and Phase 2 with implementation of Tier 4 equipment, as well as the fugitive dust reduction required by Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-1a, specifically watering all exposed areas a minimum of twice per day and enforcing a 15-mph speed limit on all unpaved surfaces.

TABLE 6.
MITIGATED MAXIMUM DAILY CONSTRUCTION EMISSIONS

Construction Activity	ROG	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Phase 1 and 2 Demolition	1.5	18.7	49.3	0.1	9.8	0.3	1.7	0.3
Phase 1 and 2 Grading	2.2	22.7	69.4	0.2	10.2	0.4	3.8	0.4
Phase 1 and 2 Underground Utilities	0.7	3.2	25.3	0.0	0.2	0.1	0.1	0.1
Phase 1 and 2 Paving	2.1	6.3	29.9	0.1	0.7	0.1	0.2	0.1
Phase 1 Building Construction	3.9	20.8	92.7	0.2	3.8	0.5	1.0	0.5
Phase 1 Architectural Coating	28.0	0.3	3.5	0.0	0.6	0.0	0.2	0.0
Phase 2 Building Construction	2.7	16.7	84.6	0.1	1.2	0.4	0.3	0.4
Phase 2 Architectural Coatings	14.3	0.2	2.3	0.0	0.2	0.0	0.1	0.0
Concurrent Activities								
2023 Building Construction + Underground Utilities	4.3	22.8	117.0	0.2	4.0	0.5	1.1	0.5
2024 Building Construction + Paving	7.3	40.2	183.8	0.4	7.5	0.9	2.0	0.9
2025 Phase 1 Building Construction + Phase 1 Architectural Coating	30.0	6.6	33.4	0.1	1.3	0.1	0.3	0.1
2025 Phase 2 Building Construction + Phase 2 Architectural Coating	17.0	16.9	87.0	0.2	1.4	0.4	0.4	0.4
Maximum Daily Emissions	**30.0**	**40.2**	**183.8**	**0.4**	**7.5**	**0.9**	**2.0**	**0.9**
BAAQMD Thresholds	*54*	*54*	*none*	*none*	*BMPs*	*84*	*BMPs*	*54*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix B).

As shown in Table 6, with implementation of the Bayside Newark TOD Specific Plan PEIR Mitigation Measures 4.2-1a and 4.2-1b, the project's construction period emissions of criteria pollutant and precursors would not exceed the BAAQMD thresholds. The impact related to emissions of criteria pollutants and precursors during project construction activities would be less than significant with mitigation incorporated and would not exceed the significance determination in the PEIR. No new impact would occur.

Operation Emissions. The results of the modeling of the project's operational emissions of criteria pollutants and precursors for Phases 1 and 2 are shown in Table 7, *Maximum Daily Operational Emissions*, and Table 8, *Annual Operational Emissions*. The data are presented as the maximum

anticipated daily emissions and annual operational emissions for the first full year of operation (2026) for comparison with the BAAQMD thresholds.

TABLE 7.
MAXIMUM DAILY OPERATIONAL EMISSIONS (POUNDS PER DAY)

Source Category	ROG	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Phase 1								
Area	14.0	0.3	29.0	<0.1	-	0.2	-	0.2
Energy	0.2	1.5	0.7	<0.1	-	0.1	-	0.1
Mobile	3.6	4.5	37.4	<0.1	8.9	<0.1	2.4	<0.1
Phase 1 Subtotal[1]	**17.9**	**6.8**	**66.5**	**<0.1**	**8.9**	**0.3**	**2.4**	**0.3**
Phase 2								
Area	1.3	<0.1	2.1	<0.1	-	<0.1	-	<0.1
Energy	<0.1	0.1	<0.1	<0.1	-	<0.1	-	<0.1
Mobile	0.3	0.4	2.7	<0.1	0.6	<0.1	0.2	<0.1
Phase 2 Subtotal[1]	**1.6**	**0.5**	**4.9**	**<0.1**	**0.6**	**<0.1**	**0.2**	**<0.1**
Operational Total[1]	**19.4**	**7.4**	**71.4**	**<0.1**	**9.5**	**0.4**	**2.5**	**0.4**
BAAQMD Thresholds	*54*	*54*	*none*	*none*	*none*	*84*	*none*	*54*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix B).
[1] Total may not sum due to rounding.

TABLE 8.
ANNUAL OPERATIONAL EMISSIONS (TONS PER YEAR)

Source Category	ROG	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Phase 1								
Area	2.5	<0.1	2.6	<0.1	-	<0.1	-	<0.1
Energy	<0.1	0.3	0.1	<0.1	-	<0.1	-	<0.1
Mobile	0.7	0.9	6.4	<0.1	1.6	<0.1	0.4	<0.1
Phase 1 Subtotal[1]	**3.2**	**1.2**	**9.0**	**<0.1**	**1.6**	**<0.1**	**0.4**	**<0.1**
Phase 2								
Area	0.2	<0.1	0.2	<0.1	-	<0.1	-	<0.1
Energy	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1
Mobile	<0.1	<0.1	0.5	<0.1	0.1	<0.1	<0.1	<0.1
Phase 2 Subtotal[1]	**0.3**	**<0.1**	**0.7**	**<0.1**	**0.1**	**<0.1**	**<0.1**	**<0.1**
Operational Total[1]	**3.4**	**1.3**	**9.7**	**<0.1**	**1.7**	**<0.1**	**0.4**	**<0.1**
BAAQMD Thresholds	*10*	*10*	*none*	*none*	*none*	*15*	*none*	*10*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix B).
[1] Total may not sum due to rounding.

Because Phase 1 could become operational during construction of Phase 2, the concurrent maximum daily emissions from Phase 2 building construction and architectural coating and Phase 1 operation are presented in Table 9, *Concurrent Daily Emissions (Pounds Per Day)*, and compared to the BAAQMD thresholds.

TABLE 9.
CONCURRENT DAILY EMISSIONS (POUNDS PER DAY)

Source Category	ROG	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Phase 2 Mitigated Building Construction	2.7	16.7	84.6	<0.1	1.2	0.4	0.3	0.4
Phase 2 Mitigated Architectural Coating	14.3	0.2	2.3	<0.1	0.2	<0.1	0.1	<0.1
Phase 1 Operational	17.9	6.8	66.5	<0.1	8.9	0.3	2.4	0.3
Total[1]	**34.9**	**23.5**	**151.3**	**<0.1**	**10.3**	**0.7**	**2.8**	**0.7**
BAAQMD Thresholds	*54*	*54*	*none*	*none*	*none*	*84*	*none*	*54*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix B).
[1] Total may not sum due to rounding.

As shown in Tables 7, 8, and 9, the maximum daily and annual operational criteria pollutant and precursors emissions, and the concurrent daily emissions would not exceed the BAAQMD thresholds. The impact related to emissions of criteria pollutants and precursors during long term operation of the project would be less than significant and would not exceed the significance determination in the PEIR. No new impact would occur.

Bayside Newark TOD Specific Plan Mitigation Measure 4.2-1a

Prior to issuance of any Grading Permit, the Public Works Director and the Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with the BAAQMD CEQA Air Quality Guidelines, the following basic construction mitigation measures shall be implemented for all construction projects:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- A publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints shall be posted. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Bayside Newark TOD Specific Plan Mitigation Measure 4.2-1b

Prior to issuance of any Grading Permit, the Public Works Director and the Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with the BAAQMD CEQA Air Quality Guidelines, the following additional construction mitigation measures shall be implemented for all construction projects:

- All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

- Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.

- Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

- The simultaneous occurrence of excavation, grading, and ground disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surface at any one time.

- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

- Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12-inch compacted layer of wood chips, mulch, or gravel.

- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

- Minimizing the idling time of diesel-powered construction equipment to two minutes.

- The project shall develop a plan demonstrating that the off-road equipment (more than 50 hp) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NO_X reduction and 45 percent PM reduction compared to the most recent CARB fleet average. Acceptable options for reducing

emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.

- Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).

- Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NO_X and PM.[2]

- Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines.[3]

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

No New Impact. In developing project-level thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary (BAAQMD 2017b). As discussed in question b), above, the project's short-term construction emissions and long-term operational emissions would not exceed the BAAQMD threshold with mitigation incorporated. Therefore, the project's emissions of criteria pollutants and precursors would be less than cumulatively considerable. The impact would be less than significant and would not exceed the significance of the impact in the PEIR. No new impact would occur.

d) Expose sensitive receptors to substantial pollutant concentrations?

No New Impact.

Construction Emissions. Implementation of the project would result in the use of heavy-duty construction equipment, haul trucks, on-site generators, and construction worker vehicles. These vehicles and equipment could generate the TAC DPM. Generation of DPM from construction projects typically occurs in a localized area (e.g., at the project site) for a short period of time. Because construction activities and subsequent emissions vary depending on the phase of construction (e.g., grading, building construction), the construction-related emissions to which nearby receptors are exposed to would also vary throughout the construction period. Concentrations of mobile-source DPM emissions are typically reduced by 70 percent at approximately 500 feet (CARB 2005).

[2] To meet the requirements of Mitigation Measure 4.2-1b for reduced diesel engine emissions, Best Available Control Technology, and CARB certification standards for off-road heavy-duty diesel engines, all off-road diesel-powered equipment with 50 or more hp shall be USEPA Tier 4 certified or be retrofitted with CARB approved equivalent diesel exhaust emissions reduction devices.
[3] See footnote above.

The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has with the substance; a longer exposure period to a fixed amount of emissions would result in higher health risks. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents based on guidance from OEHHA) and are best suited for evaluation of long duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities. Cancer potency factors are based on animal lifetime studies or worker studies where there is long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (Office of Environmental Health Hazard Assessment [OEHHA] 2015).

In addition, with implementation of Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-1b, the project would be required to use USEPA certified Tier 4 (or equivalent) off road construction equipment. Tier 4 engines are required to have systems which reduce DPM emissions by approximately 90 percent compared to non-certified engines (40 CFR Part 1039). Considering this information, the highly dispersive nature of DPM, and the fact that construction activities would occur at various locations throughout the project site, it is not anticipated that construction of the project would expose sensitive receptors to substantial DPM concentrations. The impact would be less than significant with mitigation incorporated and would not exceed the significance determination in the PEIR. No new impact would occur.

Localized Carbon Monoxide

Vehicle exhaust is the primary source of CO, and in an urban setting, the highest CO concentrations are generally found in close proximity to congested intersections. Under typical meteorological conditions, CO concentrations tend to decrease as distance from the emissions source (i.e., congested intersection) increase. Project-generated traffic has the potential of contributing to localized “hot spots” of CO off-site. Because CO is a byproduct of incomplete combustion, exhaust emissions are worse when fossil-fueled vehicles are operated inefficiently, such as in stop-and-go traffic or through heavily congested intersections. Because CO disperses rapidly, hotspots are most likely to occur in areas with limited vertical mixing such as tunnels, long underpasses, or below-grade roadways. The BAAQMD CEQA guidelines provide that, if a project is consistent with the applicable congestion management plan and would not increase traffic volumes at intersections to more than 44,000 vehicles per hour for regular intersections or would not increase traffic volumes at intersections to more than 24,000 vehicles per hour for intersections with limited vertical mixing zones, the impacts from CO hotspots would be less than significant (BAAQMD 2017a).

The project trip generation analysis concluded that the project would generate approximately 1,824 daily trips external to the Specific Plan area (Fehr & Peers 2021). These project-related trips would not result in hourly intersection traffic volumes above the 6,000 vehicles per hour analyzed in the PEIR and would not result in intersections with more than 44,000 vehicles per hour, or 24,000 vehicles per hour for intersections with limited mixing zones. Impacts related to CO hotspots would be less than significant and would not exceed the significance determination in the PEIR. No new impact would occur.

Exposure of Project Residents to TACs

In accordance with the Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-2, a project specific HRA was completed as described above. The incremental excess cancer risk is an estimate of the chance a person exposed to a specific source of a TAC may have of developing cancer from that exposure beyond the individual's risk of developing cancer from existing background levels of TACs in the ambient air. For context, the average cancer risk from TACs in the ambient air for an individual living in an urban area of California is 830 in 1 million (CARB 2015). Cancer risk estimates do not mean, and should not be interpreted to mean, that a person will develop cancer from estimated exposures to toxic air pollutants.

The potential health risks to future project residents from exposure to DPM emissions from potential future trains on the Bayside Newark Corridor right-of-way was evaluated as described in the methodology, above. The resulting highest predicted incremental increased cancer risk for the residential building closest to the proposed Transit Station and railroad tracks buildings is shown in Table 10, *Project Residential Increased Incremental Cancer Risk from Train DPM*.

TABLE 10.
PROJECT RESIDENTIAL INCREASED INCREMENTAL CANCER RISK FROM TRAIN DPM

Receptor ID	Increased Cancer Risk 6 Commuter Trains	Increased Cancer Risk 25 DMU Trains
R1	1.2 in 1 million	0.6 in 1 million
R2	1.3 in 1 million	0.6 in 1 million
R3	1.2 in 1 million	0.6 in 1 million
R4	1.1 in 1 million	0.6 in 1 million
R5	1.1 in 1 million	0.6 in 1 million
R6	1.1 in 1 million	0.6 in 1 million
R7	1.1 in 1 million	0.6 in 1 million
R8	1.0 in 1 million	0.6 in 1 million
R9	1.0 in 1 million	0.6 in 1 million
R10	1.1 in 1 million	0.6 in 1 million
R11	0.6 in 1 million	0.3 in 1 million
BAAQMD Risk Threshold	**10 in 1 million**	**10 in 1 million**
Exceed Threshold?	*No*	*No*

Source: AERMOD and HARP ADMRT, modeling data is provided in Appendix B.
Notes: Totals may not sum due to rounding.
MT = metric ton; CO_2e = carbon dioxide equivalent.

As shown in Table 10, the highest estimated incremental increase in cancer risk to future project residents from train DPM emissions would be 1.3 in 1 million for Scenario 1 (six daily commuter trains per day). The highest estimated incremental increase in cancer risk for Scenario 2 (25 DMU trains per day) would be 0.6 in 1 million. These estimated increases in risk would be below the BAAQMD threshold of 10 in 1 million. The estimated risk assumes an individual standing and breathing outside the residential building every day between 17 and 21 hours per day for 30 years. The risk estimate does not account for future reductions of DPM emissions from commuter trains as more stringent USEPA diesel locomotive engine emissions standards take effect and older locomotives are retired. The risk estimate also does not account for the likelihood that any future passenger rail service on the Bayside Newark Rail Corridor would utilize electric powered trains, consistent with the electrification program in

progress on the Caltrain lines from San Jose to San Francisco. Therefore, new sensitive receptors sited by the project would not be exposed to substantial concentrations of DPM from trains, and no mitigation would be required for future project residences. The impact would be less than significant and would not exceed the significance determination in the PEIR. No new impact would occur.

A bus stop would be located in the transit station north of the PA1 mixed-use building. The closest project residence to the proposed bus stop would be approximately 50 feet south on floors two through six of the PA1 mixed use building. The details of future bus service and schedules serving the transit station were not known at the time of this analysis. Future bus service would be provided by Alameda County Transit (AC Transit), which primarily operates diesel-powered buses. All on-road diesel engines sold in the US since 2015 are required to be USPEA Tier 4 certified. Tier 4 certified engines are required to have DPM emissions 90 percent lower than non-certified engines (40 CFR Part 1039). According to AC Transit, all of their older diesel-powered buses have been retrofitted with filter systems which reduce DPM by 85 percent (AC Transit 2020a). Future bus service to the transit station would likely comprise the closest two existing bus routes (lines 200 and 251) which provide a combined 48 buses per day and up to 3 buses per hour (AC Transit 2020b). Each bus would only be in the project vicinity (driving on Hickory Street or idling at the bus stop) for a few minutes. The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Considering the limited number of buses per hour, the short duration buses would be in the project vicinity and the reduced DPM emissions of the AC Transit bus fleet, new sensitive receptors sited by the project would not be exposed to substantial concentrations of DPM from buses, and no mitigation would be required for future project residences. The impact would be less than significant and would not exceed the significance determination in the PEIR. No new impact would occur.

Bayside Newark TOD Specific Plan Mitigation Measures

Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-1b would reduce impacts from construction-related emissions of DPM to less than significant, see above.

An HRA was completed in accordance with the Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-2. Because the health risks to future project residents from train emissions would be less than significant, residential air filtration systems specified in the mitigation measure would not be necessary.

e) Create objectionable odors affecting a substantial number of people?

No New Impact. Construction of the project would require the use of diesel-powered equipment, and the application of asphalt and paint, all of which can be a temporary source of odors. Due to the temporary and intermittent nature of construction activities, and due to the distance to the nearest sensitive receptors (single-family homes approximately 190 feet southeast), construction of the project would not result in emissions leading to odors that would adversely affect substantial numbers of people. Long-term operation of the project would not be a substantial source of odors, nor would the project exacerbate existing odors from tidal wetlands. Therefore, implementation of the project would not result in emissions leading to odors that would adversely affect substantial numbers of people, and the impact would be less than significant and would not exceed the significance of the impact in the PEIR. No new impact would occur.

IV. BIOLOGICAL RESOURCES

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☐	☐	■
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	■
c) Have a substantial adverse effect federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	■
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	■
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	■
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	■

Environmental Setting

A project-specific biological resources technical report (BTR) was prepared by HELIX (Appendix C; HELIX 2021c), and the methods and results are summarized in the following subsections.

Regulatory Framework Related to Biological Resources

Federal Requirements

Federal Endangered Species Acts

The United States Fish and Wildlife Service (USFWS) enforces the provisions stipulated in the Federal Endangered Species Act of 1973 (FESA, 16 USC Section 1531 et seq.). Species identified as threatened or

endangered (50 CFR Section 17.11, and 17.12) are protected from take, which is defined as direct or indirect harm, unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Pursuant to the requirements of the FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed species may be present on the project site and determine whether the proposed project will have a potentially significant impact on them. Under the FESA, habitat loss is considered to be a potential impact to a species. In addition, the USFWS is required to determine whether the project is likely to jeopardize the continued existence of any species that is proposed for listing under the FESA or to result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[3], [4]). Therefore, project related impacts to those species or their habitats would be considered significant and would require mitigation. Other federal agencies designate species of concern (species that have the potential to become listed), that are evaluated during environmental review although they are not otherwise protected under the FESA. Impacts to those species or their habitats would likewise be considered significant and would require mitigation.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 established federal responsibilities for the protection of nearly all species of birds, their eggs, and nests. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all non-native species. Section 16 U.S.C. 703–712 of the Act states “unless and except as permitted by regulations, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill” a migratory bird. A migratory bird is any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle. Currently, there are 836 migratory birds protected nationwide by the MBTA, of which 58 are legal to hunt. The U.S. Court of Appeals for the 9th Circuit (with jurisdiction over California) has ruled that the MBTA does not prohibit incidental take (952 F 2d 297 – Court of Appeals, 9th Circuit 1991).

State Requirements

California Endangered Species Act

The California Endangered Species Act (CESA; California Fish and Game Code Section 2050 to 2097) is similar to the FESA. The California Fish and Game Commission is responsible for maintaining lists of threatened and endangered species under the CESA. CESA prohibits the take of listed and candidate (petitioned to be listed) species. “Take” under California law means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch capture, or kill (California Fish and Game Code Section 86). The California Department of Fish and Wildlife (CDFW) can authorize take of a state-listed species under Section 2081 of the California Fish and Game Code if the take is incidental to an otherwise lawful activity, the impacts are minimized and fully mitigated, funding is ensured to implement and monitor mitigation measures, and CDFW determines that issuance would not jeopardize the continued existence of the species. A CESA permit must be obtained if a project will result in the take of listed species, either during construction or over the life of the project. For species listed under both the FESA and the CESA requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

California Code of Regulations and California Fish and Game Code

The official listing of endangered and threatened animals and plants is contained in the California Code of Regulations Title 14 Section 670.5. A state candidate species is one that the California Fish and Game Code has formally noticed as being under review by CDFW for inclusion on the state list pursuant to Sections 2074.2 and 2075.5 of the California Fish and Game Code.

Legal protection is also provided for wildlife species in California that are identified as "fully protected animals." These species are protected under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fishes) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species at any time. CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by these species. CDFW has informed non-federal agencies and private parties that they must avoid take of any fully protected species. However, Senate Bill 618 (2011) allows CDFW to issue permits authorizing the incidental take of fully protected species under the CESA, so long as any such take authorization is issued in conjunction with the approval of a Natural Community Conservation Plan that covers the fully protected species (California Fish and Game Code Section 2835).

California Environmental Quality Act

Under CEQA (Public Resources Code Section 21000 et seq.), lead agencies analyze whether projects would have a substantial adverse effect on a candidate, sensitive, or special-status species (Public Resources Code Section 21001(c)). These "special-status" species generally include those listed under the FESA and the CESA, and species that are not currently protected by statute or regulation, but would be considered rare, threatened, or endangered under the criteria included in the State CEQA Guidelines Section 15380. Therefore, species that are considered rare are addressed regardless of whether they are afforded special protection through any other statute or regulation. CDFW, in consultation with the California Native Plant Society (CNPS), assigns a California Rare Plant Rank (CRPR) to native species according to rarity; plants with a CRPR of 1A, 1B, 2A, 2B, or 3 are generally considered special-status species under CEQA.

Although threatened and endangered species are protected by specific federal and state statutes, State CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare if it can be shown to meet certain specified criteria. Those criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (i.e., candidate species) would occur. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agency has an opportunity to designate the species as protected, if warranted.

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code Section 1900-1913) empowers the Fish and Game Commission to list native plant species, subspecies, or varieties as endangered or rare following a public hearing. To the extent that the location of such plants is known, CDFW must notify property owners that a listed plant is known to occur on their property. Where a

property owner has been so notified, the owner must notify CDFW at least 10 days in advance of any change in land use (other than changing from one agricultural use to another), in order that CDFW may salvage listed plants that would otherwise be destroyed. Currently, 64 taxa of native plants have been listed as rare under the act.

Nesting and Migratory Birds

California Fish and Game Code Subsections 3503 and 3800 prohibit the possession, take, or needless destruction of birds, their nests, and eggs, and the salvage of dead nongame birds. California Fish and Game Code Subsection 3503.5 protects all birds in the orders of Accipitriformes, Falconiformes, and Strigiformes (birds of prey). Fish and Game Code Subsection 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA. The Attorney General of California has released an opinion that the Fish and Game Code prohibits incidental take.

Local Requirements

Bayside Newark Transit Oriented Development Specific Plan

The proposed project is within the Specific Plan area and for most parcels within the Specific Plan area (including the proposed project site), the evaluation conducted for the Specific Plan EIR was programmatic. That EIR requires project-specific studies and documentation to be completed for subsequent development in the Specific Plan area consistent with the requirements of CEQA. The Specific Plan EIR also contains in its MMRP measures to avoid, minimize, or mitigate potential impacts to biological resources that are required to be implemented by applicants proposing future projects in the Specific Plan area.

Trees

The City of Newark protects trees as windbreaks essential to public health and safety. The City of Newark Municipal Code Chapter 8.16.02 requires that a permit be obtained from the Public Works Director to cut down, destroy, remove, or move trees when growing on any parcel except developed residential parcels less than ten thousand square feet in area. A tree is defined in the ordinance as any live perennial woody plant with at least one well-defined stem 6 inches or greater in diameter measured at 48 inches above grade (diameter at breast height, or dbh).

Jurisdictional Waters

Clean Water Act

Any person, firm, or agency planning to alter or work in “waters of the U.S.,” including the discharge of dredged or fill material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403).

On April 21, 2020, the Environmental Protection Agency (EPA) and USACE published the Navigable Waters Protection Rule to define "Waters of the United States" in the Federal Register. On June 22, 2020, the Navigable Waters Protection Rule: Definition of "Waters of the United States" (NWPR) became effective in 49 states, including California, and in all US territories.

The NWPR regulates traditional navigable waters and perennial or intermittent tributary systems, and defines four categories of regulated waters including:

- The territorial seas and traditional navigable waters;
- Perennial and intermittent tributaries to those waters;
- Certain lakes, ponds, and impoundments; and
- Wetlands adjacent to jurisdictional waters.

The NWPR also defines 12 categories of exempted aquatic resources:

- Waters not listed as WOTUS
- Groundwater
- Ephemeral features
- Diffuse stormwater run-off
- Ditches not identified as WOTUS
- Prior converted cropland (PCC)
- Artificially irrigated areas
- Artificial lakes and ponds
- Water-filled depressions incidental to mining or construction activity
- Stormwater control features
- Groundwater recharge, water reuse, and wastewater recycling structures
- Waste treatment systems

With non-tidal waters, in the absence of adjacent wetlands, the extent of USACE jurisdiction extends to the ordinary high water mark (OHWM) – the line on the shore established by fluctuations of water and indicated by a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, or the presence of litter and debris. Wetlands are defined in 33 CFR Part 328 as:

> *"those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."*

Federal and state regulations pertaining to waters of the U.S., including wetlands, are discussed below.

Clean Water Act (33 USC 1251-1376). The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California and may require State Water Quality Certification before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there is no practicable alternative that would have less adverse impacts.

Regional Water Quality Control Board

Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also obtain a CWA Section 401 Water Quality Certification. The State of California Water Quality Certification (WQC) Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990 under the requirements stipulated by Section 401 of the Federal CWA. Although the Clean Water Act is a Federal law, Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water quality standards. In California, under Section 401, the State and Regional Water Boards are the authorities that certify that issuance of a federal license or permit does not violate California's water quality standards (i.e., that they do not violate Porter-Cologne and the Water Code). The WQC Program currently issues the WQC for discharges requiring USACE's permits for fill and dredge discharges within Waters of the United States, and now also implements the State's wetland protection and hydromodification regulation program under the Porter Cologne Water Quality Control Act.

On April 2, 2019, the SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Office of Administrative Law approved the Procedures on August 28, 2019, and the Procedures became effective May 28, 2020.

Under the Procedures and the State Water Code (Water Code §13050(e)), "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." Unless excluded by the Procedures, any activity that could result in discharge of dredged or fill material to Waters of the State, which includes Waters of the U.S. and non-federal Waters of the State, requires filing of an application under the Procedures.

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 *et seq*.) is California's statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the SWRCB and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and

RWQCBs to issue and enforce waste discharge requirements, National Pollution Discharge Elimination System (NPDES) permits, Section 401 water quality certifications, or other approvals.

California Department of Fish and Wildlife

CDFW is a trustee agency that has jurisdiction under Section 1600 *et seq*. of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of streambeds…except when the department has been notified pursuant to Section 1601." Additionally, CDFW asserts jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over four inches in dbh. If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures. Generally, CDFW recommends submitting an application for a Streambed Alteration Agreement (SAA) for any work done within the lateral limit of water flow or the edge of riparian vegetation, whichever is greater.

Methods

Studies conducted in preparation of the BTR included a desktop evaluation and background research to identify special-status species and other biological resources (e.g., wetlands) with the potential to occur on the project site or be impacted by the proposed project, as well as biological field surveys to document baseline conditions and special-status species and/or their habitats present on the site. Biological surveys conducted at the project site include biological reconnaissance surveys, protocol-level burrowing owl surveys, a tree inventory, and special-status plant surveys. The report detailing the findings of these surveys, titled "FMC Willow and Grand Park Biological Resources Technical Report", can be found in Appendix C. WRA Environmental Consultants mapped aquatic resources on the project site and prepared a Delineation of Potential Jurisdictional Wetlands and "Other Waters" Under Section 404 of the Clean Water Act in April 2013; the delineation report can also be found in Appendix C.

Project Setting

The FMC Willow and Grand Park project site is vacant following soil remediation to remove industrial contaminants that were remnants of prior uses. The project site is barren except for remnant cement pads and cement and asphalt roads. The project site is bordered by the SamTrans railroad corridor to the north, residential development to the west, Enterprise Drive and planned mixed use developments to the south, and Willow Street to the east. Part of the Don Edwards San Francisco Bay National Wildlife Refuge is approximately 1,000 feet northwest of the project site, on the other side of the existing railroad tracks. The surrounding land uses are characterized by existing and former industrial parcels, railroad, and mixed use and residential developments. Terrain in the area surrounding the project site is flat. Elevations on the project site are between approximately 9 feet and 12 feet (NGVD29) from west to east.

Following remediation, the site is barren except for some remnant cement pads and cement and asphalt roads. The site contains no natural biological communities. According to the USGS T-sheets for this area (www.sfei.org/tsheets/), the site is outside the historic boundary of tidal marshes in San Francisco Bay.

The project site falls within the Plummer Creek-Frontal San Francisco Bay Estuaries watershed (HUC12 180500040702). Plummer Creek is a tidal channel 0.5-mile south of the project site that is connected to San Francisco Bay which lies approximately 2.3 miles westward via Newark Slough. There are no waterways on the project site that directly connect to Plummer Creek or Newark Slough. Precipitation and municipal water are the only sources of water for the project site. Elevations are generally lowest in the west, and there is no clear pattern of drainage. The average annual rainfall for the City of Newark is 14.1 inches.

Results

Vegetation Communities and Land Cover

Following extensive soil remediation that included the export of contaminated soils and import of clean fill, the majority of the FMC Willow and Grand Park site is disturbed but is vegetated by weedy species typical of the region. Currently, the project site supports three vegetation communities/land covers: ruderal/disturbed, developed, and seasonal wetland (Table 11). The majority of the plant species on the site are non-native. Refer to Figure 5 for the distribution of the habitat types on the site.

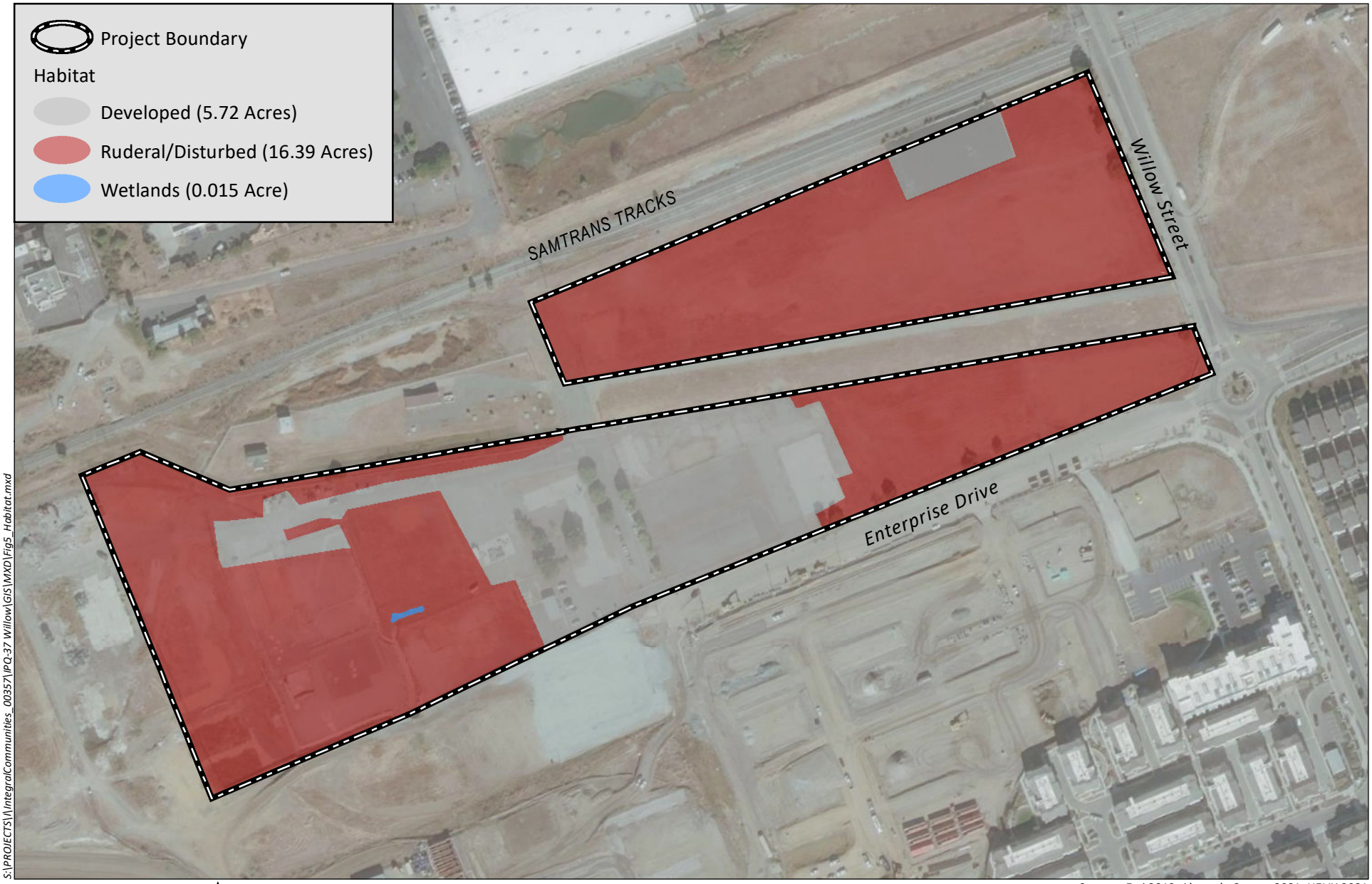
TABLE 11.
EXISTING VEGETATION COMMUNITIES AND LAND COVER TYPES IN THE PROJECT SITE

Vegetation Community/Land Cover Type	Area (acres)
Ruderal/Disturbed	16.39
Developed	5.72
Seasonal Wetland	0.015
Total	**22.125**

Ruderal/Disturbed

Ruderal/disturbed habitat occurs in areas that are heavily disturbed by past or ongoing human activities but retain a soil substrate. Ruderal/disturbed areas may be sparsely to densely vegetated but do not support a recognizable community or species assemblage. Vegetative cover is usually herbaceous and dominated by a wide variety of weedy non-native species or a few ruderal native species. The habitat in the project site is either unvegetated post-remediation or heavily dominated by a dense cover of non-native annual grasses with small patches of non-native forbs. Portions of this habitat are still subject to on-going remediation in the western portion of the site.

Ruderal/disturbed habitat provides low-quality habitat for wildlife, typically supporting only transient individuals using the area for dispersal, because of the sparse vegetation and lack of species diversity. Ruderal/disturbed habitat in the project site supports a large population of rodents such as Botta's pocket gopher (*Thomomys bottae*) and California ground squirrel (*Otospermophilus beecheyi*), which in turn provide a prey base and suitable burrow habitat for special-status birds of prey (burrowing owl) that could occur in the project site.



Source: Esri 2019, Alameda County 2021, HELIX 2021

HELIX Environmental Planning

Habitat Map

Figure 5

Developed

Developed areas are scattered throughout the project site interspersed with ruderal/disturbed habitat. The developed areas consist of paved areas with asphalt or concrete and are either former foundations for structures that are no longer present or remediation sites. Graveled and paved roads also occur in the project site. These areas are heavily disturbed and consist mostly of bare ground, paved surfaces, and/or landscaped vegetation. Landscaped vegetation may provide habitat for wildlife such as nesting birds.

Developed habitat provides low-quality habitat for wildlife, typically supporting only transient individuals using the area for dispersal, because of the sparse vegetation and lack of species diversity. California ground squirrels were observed burrowing in developed habitat, especially in areas paved with asphalt. Burrows in asphalt seemed to originate from cracks in the asphalt or along the margins of the asphalt. Burrows in developed habitat could provide habitat for special-status species such as burrowing owl.

Seasonal Wetland

There is one seasonal wetland in the project footprint; this area totals 0.015 acre and is described in detail in the delineation prepared in April 2013 by WRA Environmental Consultants and provided as part of Appendix C of this Initial Study. The seasonal wetland in the project site occurs within a constructed ditch formed as a result of former construction activity that holds water for sufficient duration to form wetland conditions. The seasonal wetland contains facultative (FAC) and facultative wetland (FACW) hydrophytic species such as salt grass (*Distichlis spicata*) and rabbit's foot grass (*Polypogon monspeliensis*). The seasonal wetland provides low-quality habitat for wildlife, typically supporting only transient individuals using the area for dispersal, because of the sparse vegetation and lack of species diversity. Waterfowl and other wildlife were observed using the small wetland.

The seasonal wetland does not qualify as potential waters of the U.S. or State and is not regulated by the USACE or the RWQCB. Additionally, the seasonal wetland in the project site does not meet the definition of a lake or stream under Section 1602 of the Fish and Game Code.

Special Status Species and Protected Habitats with Potential to Occur on the Project Site

Wildlife observed on the project site were common urban species tolerant of human presence, such as California ground squirrel, black phoebe (*Sayornis nigricans*), red-tailed hawk (*Buteo jamaicensis*), American crow (*Corvus brachyrhynchus*), Canada goose (*Branta canadensis*), killdeer (*Charadrius vociferous*), western meadowlark (*Sturnella neglecta*) and gray fox (*Urocyon cinereoargenteus*). Special-status species observed flying overhead during biological surveys include white-tailed kite (*Elanus leucurus*) and golden eagle (*Aquila chrysaetos*), both of which are CDFW fully protected species. Both birds were observed foraging and quickly passed through the site.

Special Animal Status Species

Database queries for regionally-occurring special-status animal species are included in the BTR (Appendix C). The habitat affinities of each of these species were compared to the habitats present in the project site to determine the potential for each of these species to occur in the project site. Two

special-status animal species were determined to have the potential to occur in the project site or otherwise be affected by development of the proposed project (Table 12). In addition, salt marsh harvest mouse is discussed in this section due to requirements of the MMRP in the Specific Plan EIR, although it has no potential to occur in the project site or be impacted by the proposed project and is not included in Table 12 below (see Appendix G of the BTR for the salt marsh harvest mouse habitat assessment prepared for this project).

TABLE 12.
REGIONAL SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT SITE

Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	Habitat Suitability
Birds		
Athene cunicularia burrowing owl	--/--/SSC	There is marginal suitable habitat in the project site consisting of foraging habitat and ground squirrel burrows for nesting. This species has been documented on or adjacent to the site in the CNDDB.
Elanus leucurus white-tailed kite	--/--/FP	There is potential habitat for nesting and foraging in the project site. This species was observed on site and an old nest that could provide habitat is present on site.

*SSC – state species of special concern; FP – state fully protected

Burrowing Owl (*Athene cunicularia*)
Federal Status – None
State Status – SSC
Other – None

Burrowing owls are often found in open, dry grasslands, agricultural and range lands, and desert habitats. They can also inhabit grass, forb, and shrub stages of pinyon and ponderosa pine habitats. Burrowing owls occur at elevations ranging from 200 feet below mean sea level to over 9,000 feet amsl. In California, the highest elevation where burrowing owls are known to occur is 5,300 feet amsl in Lassen County. In addition to natural habitats, burrowing owls can be found in urban habitats such as at the margins of airports and golf courses and in vacant urban lots. Burrowing owls nest in burrows and commonly perch on nearby fence posts or mounds. The owls also use ground squirrel burrows, badger dens or artificial burrows such as abandoned pipes or culverts (CDFW 2012).

Although the more northern burrowing owl populations migrate seasonally, burrowing owls are year-round residents in much of California. The owls often form loose colonies, with nest burrows approximately 50 and up to 3,000 feet apart (ICF 2012). The nesting season for burrowing owl can begin as early as February 1 and continue through August 31. Burrowing owls forage in adjacent grasslands and other suitable habitats with low vegetation primarily for insects and small mammals, and less often for reptiles, amphibians, and other small birds.

Survey History

All biological surveys included searching for burrowing owls, including transects of the site on April 4, 2019. Protocol surveys were conducted on May 2, May 23, and June 18, 2019. Protocol burrowing owl surveys were repeated the following year on February 28, 2020, and May 13, 2020. In addition,

biological reconnaissance surveys that included searching for burrowing owl and/or sign were conducted on June 3, 2020, April 26, 2021, September 22, 2021, October 26, 2021, November 9, 2021, December 1, 2021, January 4, 2022, and January 31, 2022. Burrowing owls, burrows, or sign were not observed on the project site during any of the surveys. All burrows were either abandoned, collapsed, or occupied by California ground squirrels or gray fox. Potential perch sites such as bollards were also inspected, however no indication of burrowing owl using the site was detected.

The nearest reported occurrence in CNDDB of burrowing owl is located approximately 0.5-mile north of the project site. The occurrence is from 1950 and is presumed to be extirpated. The occurrence considers the development of the vacant fields a possible cause and notes a steady decline of burrowing owls in Newark (CDFW 2020). There is another reported occurrence approximately 0.5-mile northwest from 1978 and 1979 (CDFW 2020). Burrowing owl was documented on site on January 17, 2012, in an unprocessed CDFW record (CDFW 2020). The record states that burrowing owl was observed foraging, and it does not identify any occupied burrows.

Habitat Suitability/Potential to Occur in the Project Site

The project site provides suitable nesting, foraging and wintering habitat for this species. However, due to the high level of noise and human presence on the site due to ongoing remediation as well as in the immediate vicinity of the site resulting from the surrounding development activities, the site is not highly suitable for burrowing owl. The project site contains several California ground squirrel burrows that could be used by burrowing owl for nesting or stopover during winter migration. California ground squirrel burrows are scattered all over the site, with most burrows located adjacent to the site within the Hetch Hetchy ROW. Burrows are also present along the edge of compromised paved surfaces and along other dirt berms. No burrowing owls or sign (whitewash, feathers, pellets) were detected during protocol surveys or any other biological surveys. All burrows appeared to be vacant or occupied by California ground squirrel.

White-tailed Kite (*Elanus leucurus*)
Federal Status – None
State Status – Fully Protected
Other – None

White-tailed kite is a year-round resident in California in coastal areas and lowlands in the Central Valley. Population sizes increase during the non-breeding season due to over-wintering migrants. Population also changes with the availability of prey, which may follow prey abundance. White-tailed kite prefers open stages of habitats dominated by herbaceous species (Zeiner et al. 1990). This species will nest in tall trees adjacent to foraging habitat (Zeiner et al. 1990). They feed mainly on small mammals such as voles (*Microtus* spp.) but will take other small vertebrate and invertebrate prey.

Survey History

A pair of white-tailed kites was observed in the project site during biological surveys on April 4, 2019. The pair was observed defending their territory from one red-tailed hawk, which was driven away from the project site by both kites. Habitat is present for foraging and nesting in the project site. No active nests were observed in or adjacent to the project site, although suitable nest trees are present in the project site. One old nest was observed in a pine tree along the southern boundary of the project site,

which could be an old kite nest, but is likely being used by American crow. White-tailed kites were observed on the project site again during the biological survey on February 28, 2020.

The nearest reported occurrences in CNDDB of white-tailed kite is located approximately 1.5 miles north of the project site. The occurrence is from 1971 and is presumed not to be extant (CDFW 2020). The occurrence documents white-tailed kite nesting in a deciduous tree (CDFW 2020).

Habitat Suitability/Potential to Occur in the Project Site

The project site provides suitable foraging habitat for this species but is unlikely to provide nesting habitat. This species was documented on site on April 4, 2019, during the general biological survey and was observed again in February 2020. The project site contains a few trees tall enough for nesting and one old nest suitable for white-tailed kite was observed in a pine tree on the southern boundary of the project site along Enterprise Drive. However, remediation is ongoing on the site in the vicinity of the potential nest trees and properties adjacent to the project site are currently being developed with constant activity and disturbance from heavy machinery and personnel. The pair of white-tailed kites observed during the survey did not appear to be nesting onsite even though they displayed territorial behaviors; they only appeared to be foraging. The pair was likely nesting somewhere near the project site and occasionally using the site for foraging.

Salt Marsh Harvest Mouse (*Reithrodontomys raviventris*)
Federal Status – Endangered
State Status – Endangered
Other – None

The salt marsh harvest mouse (SMHM) was federally listed as endangered in its entire range on October 13, 1970 (Federal Register 35: 16047). Critical habitat has not been designated for this species. This mouse is also state listed as endangered. A recovery plan for the SMHM was prepared in 1984 and is currently under revision.

The SMHM is endemic to tidal and brackish marsh habitats of the San Francisco Bay region. SMHM are primarily found in the salt marshes along northern San Pablo Bay, surrounding Suisun Bay, and along southern San Francisco Bay (USFWS 1984). The acreage believed to be necessary to sustain a healthy SMHM population is 150 acres or more (USFWS 2010). The SMHM is critically dependent on dense cover and its preferred habitat is considered to be pickleweed dominated salt marsh wetlands. Studies have found SMHM occur not only in tidal wetlands dominated by pickleweed, but also in wetlands with little or no pickleweed, in diked wetlands, and in transition zones dominated by annual grasses. However, the extent to which SMHM depend upon these habitats has not been explicitly quantified (Sustaita et al. 2011). Recent studies have also shown that SMHM are more flexible in habitat use and with their diet than previously thought (Smith and Kelt 2019). SMHM will use non-native plant species, such as rabbitsfoot grass (*Polypogon monspeliensis*), in their diet (Smith and Kelt 2019) in addition to other native species. They are not tied exclusively to pickleweed dominated wetlands and will also use other mixed vegetation wetlands (Sustaita et al. 2011). This shows that SMHM may use mixed vegetation salt marsh habitat (Sustaita et al. 2011; Smith et al 2014).

In marshes with an upper zone of halophytes in the intertidal zone, SMHM will use the tall vegetation to escape high tides and may also move into adjoining grasslands during the highest winter tides, especially in areas with shorter emergent salt marsh habitat (Sustaita et al. 2011; Smith et al 2014). During a live

trapping study that used radio telemetry, the study found that salt marsh harvest mice rarely used upland areas with annual grasses but preferred to stay in taller vegetation in the intertidal zone during high tide (Smith et al. 2014). The best type of pickleweed association for the species has: 100 percent vegetative cover with a cover depth of 30 to 50 centimeters at summer maximum, at least 60 percent cover of pickleweed, and additional halophytes such as fat hen (*Atriplex patula*) and alkali heath (*Frankenia salina*). The amount of salt grass, brass buttons (*Cotula coronopifolia*), alkali bulrush (*Bolboschoenus maritimus*), or other species (e.g., *Schoenoplectus* sp. or *Typha* sp.) should be low (USFWS 1984).

The SMHM and California Clapper Rail Recovery Plan (USFWS 1984) lists five principal reasons for the decline of the SMHM: (1) habitat loss, (2) fragmentation of the remaining marshes, (3) widespread loss of the high marsh zone as a result of backfilling, (4) land subsidence, and (5) vegetational change. It further points out that small marshes, separated by open land or dikes, have very low immigration, and that very few areas are likely to be recolonized.

Survey History

A habitat assessment for SMHM was conducted by a SMHM-permitted biologist in accordance with the requirements of the Bayside Newark TOD EIR MMRP (Appendix G of the BTR provided as Appendix C to this Initial Study).

Habitat Suitability/Potential to Occur in the Project Site

The project site and immediate vicinity does not contain suitable habitat for SMHM. There is no potential for SMHM to occur within the project boundaries. Refer to the habitat assessment for SMHM in Appendix G of the BTR (provided as Appendix C to this Initial Study) for further discussion.

Nesting Migratory Birds and Raptors

Native birds are protected by the MBTA and the California Fish and Game Code, which prohibit direct take of adults, nests, eggs, and chicks. Disturbance that leads to nest abandonment can be considered take of eggs and chicks. Common bird species found on the project site include species that nest on all types of substrata, including bare ground, herbaceous and woody vegetation, pipes, debris, poles, and structures.

Potential nesting habitat is limited on the project site; however, the proposed project may include removal of vegetation that provides potential nesting habitat for nesting birds. Project construction activities would potentially result in impacts to nesting birds if construction of the proposed project commences during the typical nesting period for migratory birds. Construction activities and construction-related disturbance (noise, vibration and increased human activity) could adversely affect these species if they were to nest in or adjacent to the project area. Potential effects include physical destruction of nests by construction equipment and/or nest abandonment.

Construction of the proposed project would increase the number of people in close vicinity to potentially suitable nesting and foraging habitat for nesting birds. Similar to those identified for burrowing owl and white-tailed kite, associated potential impacts would include harassment from increased noise and activity in the vicinity of potentially suitable habitat, degradation of habitat from litter and light spillover from the nearby development, and the potential for increased depredation as a

result of increased traffic from potential nest predators, such as feral cats, dogs, raccoons, foxes and other predatory domestic animals and wildlife associated with an urban setting.

The keeping of outside feline pets or feral cat feeding stations would be prohibited, thereby reducing the potential for cats to prey on or harass nesting birds in suitable habitat near the project site. Lighting would be designed consistent with Policy LU-6.6 of the City General Plan Land Use Element, and the Site and Architecture Design Guidelines contained in the Specific Plan which require that the lighting be designed to reduce glare and over-lighting impacts.

Special-Status Plants

Habitat for special-status plants is not present on the site because the site has been developed, and it is currently disturbed with non-native and imported soil and paved surfaces. In addition, no special-status plant species have been documented on the site during focused botanical surveys or numerous other biological surveys.

Protected Trees

A total of 32 trees meeting the City of Newark Municipal Code definition of protected trees were identified in the project site. Two additional trees that would have met the size threshold were dead. The condition of the 32 live trees ranged from good to declining. Tree species present included Monterey pine (*Pinus radiata*), shamel ash (*Fraxinus uhdei*), carrotwood (*Cupaniopsis anacardioides*), cork oak (*Quercus suber*), coast live oak (*Quercus agrifolia*), and Mexican fan palm (*Washingtonia robusta*). These trees do not provide a windbreak on which a substantial number of people depend, and therefore are eligible for removal to facilitate development of the proposed project. A permit would likely be required from the City of Newark Public Works Director prior to removal, destruction, or transplantation of any trees included in the inventory. Details regarding the location and condition of the trees in the project site are provided in Appendix C.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Biological Resources are discussed in Chapter 4.3 of the PEIR prepared for the Specific Plan. The PEIR concludes that implementation of the Specific Plan could have potentially significant adverse impacts on biological resources and includes measures to reduce impacts to less than significant. The PEIR concluded that the Specific Plan area is not located within a Habitat Conservation Plan or Natural Community Conservation Plan and would not conflict with the provisions of any such plan. Potential impacts to biological resources identified in the Specific Plan EIR include potential impacts to SMHM (Measure 4.3-1), nesting raptors (4.3-2), burrowing owl (4.3-3), nesting passerines (4.3-4), special-status plants (4.3-5), wetlands and waters of the U.S./State (4.3-6), wildlife corridors (4.3-7), and protected trees (4.3-8). The subject project was evaluated for its potential to result in impacts identified in the PEIR, as well as any potential impacts not identified in the PEIR. Each potentially significant impact in the Specific Plan PEIR is discussed below. No other potential impacts were identified for the proposed project that were not evaluated in the Specific Plan PEIR.

Evaluation of Biological Resources

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No New Impact.

Potential Impacts to Salt Marsh Harvest Mouse

The project site lacks marsh habitat, associated dense stands of perennial marsh vegetation, and stands of pickleweed necessary to support SMHM. The areas surrounding the project site are generally developed or undergoing development currently and therefore also do not have the required habitat to support SMHM. There is no suitable habitat for SMHM on or immediately adjacent to the project site, and therefore no potential for SMHM to occur within the project boundaries or be impacted by project construction. A SMHM habitat assessment was conducted by a SMHM-permitted biologist that concluded the project site has no potential to support SMHM, and the project would not impact this species. Therefore, the proposed project would have no impact to SMHM, and no new impact would occur.

Potential Impacts to Nesting Raptors

There are trees on and adjacent to the site that are potentially suitable for raptor nesting, although no active raptor nests were observed during biological surveys. Potential impacts to nesting raptors could occur if nesting began on or near the site prior to construction including destruction of nests, forced fledging of young, or nest abandonment by the adults. Bayside Newark TOD Specific Plan Mitigation Measure 4.3-2 shall be implemented in accordance with the Specific Plan MMRP to reduce potential impacts to nesting raptors.

> **Bayside Newark TOD Specific Plan Mitigation Measure 4.3-2 (Nesting Raptors)**
>
> In order to avoid impacts on nesting raptors, a nesting survey shall be conducted on individual project site parcels prior to commencing with earth-moving or construction work if this work would occur during raptor nesting season (between February 1 and August 31). The raptor nesting survey shall include examination of all trees on or within 300 feet of the entire project site, not just trees slated for removal, since ground vibrations and noise from earth-moving equipment can disturb nesting birds and potentially result in nest abandonment. Since northern harriers are ground nesting raptors, the nesting survey shall also include systematic walking transects across all suitable ground on the project site parcels.
>
> If nesting raptors are identified during the surveys, orange construction fence shall be installed to establish a 300-foot radius around the nest unless a qualified biologist determines that a lesser distance will adequately protect the nest (refer to discussion below for more detail). If the tree or nest is located off the project site, then the buffer shall be demarcated per the above where the buffer intersects the project site.

The size of the non-disturbance buffer may be altered if a qualified raptor biologist conducts behavioral observations and determines the nesting raptors are well acclimated to disturbance. If this occurs, the raptor biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to nesting raptors.

If the buffer is reduced, the qualified raptor biologist shall remain onsite to monitor the raptors' behavior during heavy construction in order to ensure that the reduced buffer does not result in take of eggs or nestlings. No construction or earth-moving activity shall occur within the established buffer until it is determined by a qualified raptor biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by August 1. This date may be earlier or later and would have to be determined by a qualified raptor biologist.

If a qualified biologist is not hired to monitor the nesting raptors, then the full 300-foot buffers shall be maintained in place from February 1 through the month of August. The buffer may be removed, and work may proceed as otherwise planned within the buffer on September 1.

With implementation of Bayside Newark TOD Specific Plan Mitigation Measure 4.3-2, impacts to nesting raptors would be less than significant. No new impact would occur.

Potential Impacts to Burrowing Owl

No burrowing owl has been observed on the project site; however, additional pre-construction surveys are warranted as the site provides moderately suitable habitat for burrowing owl. This species could potentially be impacted by construction if it were to occupy the site. Bayside Newark TOD Specific Plan Mitigation Measure 4.3-2 above shall be implemented in accordance with the Specific Plan MMRP. If burrowing owl pair(s) or resident burrowing owl is observed during any of the pre-construction surveys, avoidance and compensatory mitigation would be required, as described below. The project specific mitigation presented below reflects revisions to Bayside Newark TOD Specific Plan Mitigation Measure 4.3-3 for consistency with the 2012 CDFW guidelines for preconstruction surveys and to address potential impacts to burrowing owls in the project site.

Bayside Newark TOD Specific Plan Mitigation Measure 4.3-3 (Western Burrowing Owls)

Western burrowing owl surveys shall be conducted by a qualified western burrowing owl biologist 90 days prior to construction of any project within the project site and again 30 days prior to construction of a project as described below to ensure there are no impacts on burrowing owls. Burrowing owl surveys conducted according to the methodologies prescribed by California Department of Fish and Wildlife (CDFW) in their 1995 Staff Report on Burrowing Owl Mitigation are more likely to be accepted by CDFW. The survey methodologies that will otherwise meet the standards of care required by CEQA are provided below. These methods may not be as intense as those methods described in the document cited above but these methods have been coordinated with CDFW biologists for other projects and are sufficient for detecting burrowing owls provided an experienced burrowing owl biologist conducts the surveys.

Using the methodology prescribed below, burrowing owl and burrow surveys shall be conducted 90 and 30 days in advance of project site disturbance. Two surveys shall be conducted 90 days

before ground disturbance associated with the project, and two surveys shall be conducted in the 30-day period prior to ground disturbance associated with the project. The CDFW Staff Report states that preconstruction surveys need to be completed within 30 days of grading prior to CDFW accepting a survey conclusion that no burrowing owls occur in a proposed study area (i.e., negative findings). Western burrowing owl surveys shall be conducted from two hours before sunset to one hour after, or one hour before to two hours after sunrise. All burrowing owl sightings, occupied burrows, and burrows with owl sign (e.g., pellets, excrement, and molt feathers) shall be counted and mapped. Surveys shall be conducted by walking all suitable habitat on the entire project site and (where possible) in areas within 150 meters (approximately 500 feet) of the project impact zone. The 150-meter buffer zone is surveyed to identify burrows and owls outside of the project area which may be impacted by factors such as noise and vibration (heavy equipment) during project construction. Pedestrian survey transects shall be systematically spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines shall be no more than 30 meters (approx. 100 feet) and shall be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To effectively survey large projects (100 acres or larger), two or more surveyors shall be used to walk adjacent, parallel transects. To avoid impacts on owls from surveyors, owls and/or occupied burrows shall be avoided by a minimum of 50 meters (approx. 160 feet) if in the non-breeding months (October 1 through February 1) and 250 feet during the breeding months (February 1 through October 1). Disturbance to occupied burrows and within the established buffers shall be avoided until no burrowing owls occur on the site.

If burrowing owls are detected on the site during the breeding season (peak of the breeding season is April 15 through July 15), and appear to be engaged in nesting behavior, a fenced 250-foot buffer shall be required between the nest site(s) (i.e., the active burrow(s)) and any earth-moving activity or other disturbance in the project area. This 250-foot buffer could be decreased to 160 feet once it is determined by a qualified burrowing owl biologist that the young have fledged (that is, left the nest). Typically, the young fledge by August 31. This date may be earlier than August 31, or later, and would have to be determined by a qualified burrowing owl biologist. If burrowing owls were found on the project site, a qualified biologist shall delineate the extent of burrowing owl habitat on the site.

To mitigate impacts to burrowing owls, CDFW prescribes that 6.5 acres of replacement habitat be set aside (i.e., protected in perpetuity) per pair of burrowing owls, or unpaired resident bird. Such a set-aside would offset permanent impacts on burrowing owl habitat. To illustrate the extent of mitigation land required by CDFW, this example is provided: If two pairs of burrowing owls are identified on the study area, 13 acres of mitigation land would be acquired. Or, if one pair and one resident bird are identified, 13 acres of mitigation land would be acquired. The protected lands shall be adjacent to occupied burrowing owl habitat if possible, and at a location selected in consultation with CDFW. Land identified to offset impacts on burrowing owls shall be protected in perpetuity by a suitable property instrument (e.g., a conservation easement or fee title acquisition). A Mitigation Plan shall be prepared in consultation with CDFW for review and approval by the City.

The Mitigation Plan shall identify the mitigation site and any activities proposed to enhance the site, including the construction of artificial burrows and maintenance of California ground squirrel populations on the mitigation site. In addition, for each pair of burrowing owls found in the construction area, two artificial nesting burrows shall be created at the mitigation site. The

Plan shall also include a description of monitoring and management methods proposed at the mitigation site. Monitoring and management of any lands identified for mitigation purposes shall be the responsibility of the applicant for at least five years. An annual report shall be prepared for submittal to CDFW and the City by December 31 of each monitoring year. Contingency measures for any anticipated problems should be identified in the plan.

If a burrowing owl pair(s) or resident burrowing owl is observed during any of the pre-construction surveys completed in accordance with Mitigation Measure 4.3-2, then implementation of Mitigation Measure 4.3-3 would be required, and impacts to burrowing owl would be reduced to a less-than-significant level. No new impact would occur.

Potential Impacts to Nesting Passerines and Other Birds

Potential nesting habitat is limited on the project site; however, the proposed project may include removal of vegetation that provides potential nesting habitat for nesting birds. Project construction activities would potentially result in impacts to nesting birds if construction of the proposed project commences during the typical nesting period for migratory birds. Construction activities and construction-related disturbance (noise, vibration, and increased human activity) could adversely affect these species if they were to nest in or adjacent to the project area. Potential effects include physical destruction of nests by construction equipment and/or nest abandonment.

Bayside Newark TOD Specific Plan Mitigation Measure 4.3-4 shall be implemented in accordance with the Specific Plan MMRP. Pre-construction surveys will be conducted, and appropriate nest-avoidance measures shall be implemented if these species are present adjacent to the construction area. No surveys will be required if construction is initiated outside of the nesting season.

Bayside Newark TOD Specific Plan Mitigation Measure 4.3-4 (Nesting Birds)

In order to avoid impacts on nesting passerines, a nesting survey shall be conducted on individual project site parcels and within 100 feet of the parcel being developed prior to commencing initial earth-moving or construction work on that parcel if this work would occur during the passerine nesting season, that is, between March 1 and September 1. The nesting survey shall also survey lands within 100 feet of the parcel being developed. The nesting surveys shall be completed approximately 15 days prior to commencing work. If special-status birds are identified nesting on or near the project site, a 100-foot radius around all identified active nests shall be demarcated with orange construction fencing to establish a non-disturbance buffer. If an active nest is found offsite, the intersecting portion of the buffer that is onsite shall be fenced. No construction or earth-moving activity shall occur within this 100-foot staked buffer until it is determined by a qualified biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones.

If common (that is, not special-status) birds, for example, red-winged blackbird, are identified nesting on or adjacent to the project site, a non-disturbance buffer of 75 feet shall be established or as otherwise prescribed by a qualified ornithologist. The buffer shall be demarcated with orange construction fencing. Disturbance around an active nest shall be postponed until it is determined by the qualified wildlife biologist that the young have fledged and have attained sufficient flight skills to leave the area.

Typically, most birds in the region of the project site are expected to complete nesting by August 1. However, in the region many species can complete nesting by the end of June or in early to mid-July. Regardless, nesting buffers shall be maintained until August 1 unless a qualified wildlife biologist determines that young have fledged and are independent of their nests at an earlier date. If buffers are removed prior to August 1, the biologist conducting the nesting surveys shall prepare a report that provides details about the nesting outcome and the removal of buffers. This report shall be submitted to the City project planner prior to the time that buffers are removed if the date is before August 1.

With implementation of the above measure, impacts to nesting passerines and other birds would be less than significant. No new impact would occur.

Potential Impacts to Special Status Plants

HELIX biologists conducted focused botanical surveys on April 4, May 23, and June 18, 2019, during the bloom season of regionally-occurring special-status plants. No special-status plant species were observed on the site. Habitat for special-status plants on the site is not present since the site has been disturbed from soil remediation and is currently covered with nonnative and imported soil and paved surfaces. Therefore, special-status plants are presumed absent from the project site, and no impacts to special-status plant species are anticipated. No mitigation measures are necessary for special-status plants, and no new impact would occur.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

No New Impact. Neither non-jurisdictional seasonal wetland nor ruderal/disturbed habitat are considered riparian habitat or a sensitive community. Therefore, no riparian habitat or other sensitive community would be impacted by the project, and no new impact would occur.

c) Have a substantial adverse effect on federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

No New Impact. Although 0.015 acre of seasonal wetland occurs on the site, WRA concluded that the entire 0.015-acre of land meeting wetland criteria appears to be isolated as no connection to navigable waters was apparent. All features appear to be man-made ditches and depressions left over from industrial activities on the site.

The analysis by WRA Environmental Consultants in April 2013 (Appendix C) concluded that the seasonal wetland does not qualify as potential waters of the U.S. and State and are not regulated by the USACE or the RWQCB. Additionally, the seasonal wetland in the project site does not meet the definition of a lake or stream under Section 1602 of the Fish and Game Code.

Therefore, no potential impact to State or federally jurisdictional areas would occur and neither notification of nor authorization from CDFW, RWQCB, or USACE is required. No protected wetlands would be impacted by the project, and no new impact would occur.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

No New Impact. The project site and surrounding area feature previous industrial land uses and mixed uses that are currently under construction or planned for development. The project site does not provide important habitat for movement of any native species or a migratory wildlife corridor, nor would development of the project impede the use of native wildlife nursery sites. Therefore, there would be no impact, and no new impact would occur.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No New Impact.

Potential Impacts to Protected Trees

A total of 32 trees meeting the City of Newark Municipal Code definition of protected trees were identified in the project site. The condition of the 32 trees ranged from good to declining. Tree species present included Monterey pine (*Pinus radiata*), shamel ash (*Fraxinus uhdei*), carrotwood (*Cupaniopsis anacardioides*), cork oak (*Quercus suber*), coast live oak (*Quercus agrifolia*), and Mexican fan palm (*Washingtonia robusta*). These trees do not provide a windbreak on which a substantial number of people depend, and therefore are eligible for removal to facilitate development of the proposed project. A permit would be required from the City of Newark Public Works Director prior to removal, destruction, or transplantation of any trees included in the tree inventory conducted on the project site (See Appendix G of the BTR provided as Appendix C to this Initial Study for the Arborist Report).

Bayside Newark TOD Specific Plan Mitigation Measure 4.3-8 (Protected Trees)

A tree permit shall be obtained from the City prior to the removal of any tree protected by City ordinance on project site parcels. To offset impacts resulting from the removal of these trees, replacement trees shall be planted in designated open space areas on the subject parcel. Tree replacement shall be at a 1:1 ratio (that is, for each tree removed, one tree shall be planted as a replacement). Replacement trees shall be species that are native to the Newark area.

Replacement trees planted adjacent to the Don Edwards San Francisco Bay National Wildlife Refuge should first be coordinated with the Refuge to avoid the introduction of perching sites for predatory species.

A Tree Management Plan shall be prepared for any project on any project site parcel where tree removal occurs. Preparation of this plan and subsequent planting and monitoring shall be a condition of project approval and shall be tied to a security bond or cash deposit posted by the developer with the City to pay for any remedial work that might need to occur if the prior effort fails.

All planted trees shall be provided with a buried, irrigation system that shall be maintained over a minimum three-year establishment period. The irrigation system shall be placed on automatic

electric or battery-operated timers so that trees are automatically watered during the dry months of the establishment period. At the end of the three-year establishment period, the irrigation system could be removed, if necessary. The planted trees' health shall be monitored annually for five years by a qualified biologist or arborist. Annual monitoring reports shall be submitted to the City.

At the end of a five-year monitoring period, at least 80 percent of planted trees shall be in good health. If the numbers of planted trees falls below an 80 percent survival rate, additional trees shall be planted to bring the total number of planted trees up to 100 percent of the original number of trees planted. Irrigation and follow-up monitoring shall be established over an additional three-year period after any replanting occurs. Any replanting and follow-up monitoring shall be reported in annual reports prepared for the City, Community Development Department. A performance bond, letter of credit, or other financial instrument shall be established to pay for any remedial work that might need to occur if the prior effort fails.

With implementation of Bayside Newark TOD Specific Plan Mitigation Measure 4.3-8, impacts to protected trees would be less than significant. No new impact would occur.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No New Impact. No Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan has been approved for the City of Newark. Therefore, no impacts to an existing adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan would occur, and no new impact would occur.

V. CULTURAL RESOURCES

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section15064.5?	☐	☐	☐	■
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section15064.5?	☐	☐	☐	■
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	■
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	■

A project-specific cultural resources assessment (CRA) was prepared by HELIX (Appendix D; HELIX 2021d), and the methods and results are summarized in the following subsections.

Regulatory Setting

State and federal legislation requires the protection of historical and cultural resources. In 1971, President's Executive Order No. 11593 required that all federal agencies initiate procedures to preserve and maintain cultural resources by nomination and inclusion on the National Register of Historic Places (NRHP). In 1980, the Governor's Executive Order No. B-64-80 required that state agencies inventory all "significant historic and cultural sites, structures, and objects under their jurisdiction which are over 50 years of age and which may qualify for listing on the National Register of Historic Places." Section 15064.5(b)(1) of the State CEQA Guidelines specifies that projects that cause "…physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired" shall be found to have a significant impact on the environment. For the purposes of CEQA, an historical resource is a resource listed in, or determined eligible for listing in the California Register of Historical Resources (CRHR). When a project could impact a resource, it must be determined whether the resource is an historical resource, which is defined as a resource that:

(A) is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political or cultural annals of California; and,

(B) Meets any of the following criteria: 1) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; 2) is associated with the lives of persons important in our past; 3) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or 4) has yielded, or may be likely to yield, information important in prehistory or history. In addition, properties listed in or formally determined eligible for listing in the NRHP are automatically considered eligible for the CRHR.

CEQA applies to archaeological resources when (1) the archaeological resource satisfies the definition of a historical resource, or (2) the archaeological resource satisfies the definition of a "unique archaeological resource." A unique archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria:

- The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
- The archaeological resource has a special and particular quality such as being the oldest of its type or the best available example of its type.
- The archaeological resource is directly associated with a scientifically recognized important prehistoric or historic event or person.

Cultural Background

Following is a brief summary providing a context in which to understand the background and relevance of resources that may occur in the general project area. This section is not intended to be a comprehensive review of the current resources available; rather, it serves as a general overview. Further details can be found in ethnographic studies, mission records, and major published sources.

Native American Background

At the time of European contact, the general Newark area was occupied by various tribelets that were part of the Ohlone (previously Costanoan) tribe of California Native Americans (Levy 1978). The Ohlone group designates a language family consisting of eight branches of the Ohlone language that are considered too distinct to be dialects, with each being related to its geographically adjacent neighbors (Levy 1978).

The various Ohlone tribes subsisted as hunter-gatherers and relied on local terrestrial and marine flora and fauna for subsistence (Levy 1978). The predominant plant food source was the acorn, but they also exploited a wide range of other plants and the protein sources included grizzly bear, elk, and black-tailed deer as well as smaller mammals. Waterfowl, including Canada geese, mallards, green-winged teal, and American widgeon, were captured in nets using decoys to attract them. Fish also played an important role in the Ohlone diet and included steelhead, salmon, and sturgeon (Jones 2007).

The Ohlone constructed watercraft from tule reeds and possessed bow and arrow technology. They fashioned blankets from sea otter pelts, fabricated basketry from twined reeds of various types, and assembled a variety of stone and bone tools in their assemblages. Ohlone villages typically consisted of domed dwelling structures, communal sweathouses, dance enclosures, and assembly houses constructed from thatched tule reeds and a combination of wild grasses, wild alfalfa, and ferns.

The Ohlone were politically organized into autonomous tribelets that had distinct cultural territories. Individual tribelets contained one or more villages with several seasonal camps for resource procurement within the tribelet territory. The tribelet chief could be either male or female, and the position was inherited patrilineally, but approval of the community was required. The tribelet chief and council were essentially advisors to the community and were responsible for feeding visitors, directing hunting and fishing expeditions, ceremonial activities, and warfare on neighboring tribelets.

The Gold Rush brought disease to the native inhabitants, and by the 1850s, nearly all the Ohlone had adapted in some way or another to economies based on cash income. Hunting and gathering activities continued to decline and were rapidly replaced with economies based on ranching and farming.

Historic Background – Spanish Mission Period

The most drastic and permanent change came to the local Ohlone way of life with the establishment of the Spanish Mission system. By the early 1800s, the mission fathers began a process of cultural change that brought the majority of local Native Americans into the missions. At the expense of traditional skills, the neophytes were taught the pastoral and horticultural skills of the Hispanic tradition. If the Native Americans tried to escape, the Spanish missionaries traveled into valley regions to recapture them and recruit inland Native Americans for the coastal missions. In 1834, the Mission system was officially secularized, and most of the mission Native American population dispersed to local ranches, villages, or nearby pueblos. Following the collapse of the mission system, many of the local Native Americans returned to northern California, bringing with them language and agricultural practices learned from the Spanish. During the latter half of the 19th century, the size of all Native American populations dwindled dramatically, due to the spread of European settlements and the diseases the Europeans brought with them (Mission San Jose 2020).

Historic Background – Mexican Period

With the declaration of Mexican independence in 1821, Spanish control of Alta California ended, although little change occurred. Political change did not take place until mission secularization in 1834, when Native Americans were released from missionary control and the mission lands were granted to private individuals. Shoup and Milliken (1999) state that mission secularization removed the social protection and support on which Native Americans had come to rely. It exposed them to further exploitation by outside interests, often forcing them into a marginal existence as laborers for large ranchos. Following mission secularization, the Mexican population grew as the native population continued to decline. Anglo-American settlers began to arrive in Alta California during this period and often married into Mexican families, becoming Mexican citizens, which made them eligible to receive land grants. In 1846, on the eve of the U.S.-Mexican War (1846 to 1848), the estimated population of Alta California was 8,000 non-natives and 10,000 natives. However, these estimates have been debated. Cook (1976) suggests the Native American population was 100,000 in 1850; the U.S. Census of 1880 reports the Native American population as 20,300.

Historic Background – European Expansion

In 1848, as a result of the Treaty of Guadalupe Hidalgo, California became a United States territory. Also in 1848, John Marshall found gold at Sutter's Mill in Coloma, which marked the start of the Gold Rush. The influx of miners and entrepreneurs increased the population of California, not including Native Californians, from 14,000 to 224,000 in just four years. This massive jump in population allowed California to meet the requirements to petition for statehood resulting in California becoming a state in 1850. At this point, large numbers of American businessmen, ranchers, orchardists, farmers, entrepreneurs, immigrants, religious groups, and anyone else who could make the trip by boat or overland flocked to California. Drawn by the benign climate, fertile land, access to ports for shipping and trade, and a vast array of business opportunities, Euro-Americans flocked to California. More came each decade, establishing businesses, farms, and ranches, creating commercial and industrial ventures and buying up land from the Mexican families to subdivide and create towns and cities. Cities such as San

Francisco and Sacramento benefited greatly from the newcomers and the business developments, becoming more diverse and economically successful with each decade.

Historic Background – City of Newark

The City of Newark is comprised of approximately 14 square miles of land. Newark was incorporated on September 22, 1955, and it is part of what is referred to as the “Tri-City” area which includes Newark, Fremont, and Union City. In 2015, the city’s population was approximately 44,000 people. The development of Newark followed the same patterns of change and growth as did most of California during the Mexican and American periods. After California statehood, the American presence in the San Francisco Bay region increased steadily. The following is excerpted from www.newark.org/vistors/history.

By the early 1850s, small landings were under construction along the San Francisco Bay area near Newark. In 1853, Mayhew's Landing included warehouses for wheat, hay, and coal and by 1856 the Mayhew Ranch included 1,500 acres of farmland extending inland to present-day I-880. Less than 20 years later, the Perrin brothers acquired the old Mayhew’s Ranch and extended their holdings to include property stretching from today's Jarvis Avenue on the north to south of Thornton Avenue. The Perrin brothers' "development project," the Green Point Dairy and Transportation Company, set the tone for future development. It was the Perrin brothers who first drew up plans to subdivide the Green Point Dairy into a townsite (located in the general vicinity of Thornton and Jarvis Avenues).

Work started on a railroad through the townsite from Bayside Newark Point in 1875. In 1876, the railroad, together with the Green Point Dairy, were purchased and completed the South Pacific Coast Railroad, from Bayside Newark Point south to Santa Cruz. Soon, a railroad station, roundhouse, and railroad shop buildings were being erected in the center of Newark in the area between Thornton Avenue, Sycamore Street, and Carter Avenue. Eventually, the railroad was extended north from Newark to Alameda, providing direct ferry service to San Francisco.

The completion of the railroad precipitated additional development in Newark. Hotels and stores were soon constructed, along with some of the first manufacturing industries, including a railroad car building firm and a foundry which later manufactured Wedgewood stoves. These enterprises joined the production of salt, which had been underway in the Newark area since the 1850s. Acquisitions and mergers of salt production companies throughout the Bay area ultimately resulted in formation of the Arden Salt Company, predecessor to Leslie Salt Company and today's Cargill Salt.

The City of Newark lies close to Silicon Valley with its high-tech companies and digital technology. Over the twentieth century, industrial growth within and surrounding Newark, added to the economic base. In September 1955, Newark was incorporated as the first new city in Alameda County in 47 years. Because of these efforts, Newark has built the Newark Mall, with its jobs and tax revenues, completed the Bayside Newark Bridge and maintained and improved much of the Nimitz Freeway.

Record Searches

Northwest Information Center Record Search

A records search addressing the project area and a 0.5-mile radius beyond the project area boundary (together referred to as the study area) was conducted on April 17, 2018, at the Northwest Information Center (NWIC) in Rohnert Park by HELIX Archaeologist Katherine D. Thomas, M.A., RPA. Sources of information included previous survey and cultural resources files; the NRHP; the CRHR; the Office of Historic Preservation (OHP) Archaeological Determinations of Eligibility; the OHP Directory of Properties in the Historic Property Data File; and historical topographic maps and aerial photographs.

Native American Heritage Commission Sacred Lands File Search

A Sacred Lands File (SLF) search request was submitted to the NAHC on November 3, 2017. On November 17, 2017, a response was received from the NAHC indicating that the results of the SLF record search were negative for the project APE. Included with the response was a list of six Native American tribal representatives who may have additional information pertaining to the project. On November 28, 2017, HELIX sent information request letters to each of the representatives listed below asking for any additional information they may have. HELIX noted that the request was for informational purposes only and not related to consultation under Assembly Bill (AB) 52. To date, no responses have been received from any of the tribal representatives.

Pedestrian Survey

On May 6, 2020, HELIX Staff Archaeologist Katherine D. Thomas, M.A, RPA conducted an intensive pedestrian survey to characterize any prehistoric or historic-era archaeological resources located within the FMC Willow portion of the Areas of Potential Effect (APE) (i.e., the portion of the site proposed for residential, transit, and commercial uses). The survey consisted of a pedestrian walk-over of all accessible portions of the APE in parallel transects spaced at 15-meter intervals. During the survey, the ground surface was examined for the presence of historic-era artifacts (e.g., metal, glass, ceramics), prehistoric artifacts (e.g., flaked stone tools, tool-making debris), and other features that might represent human activity that took place more than 50 years ago. Representative photographs of the APE are found in Appendix C of the CRA provided in Appendix D of this IS.

Survey conditions were poor, with less than 20 percent surface visibility due to heavy grass cover in areas that were not capped by asphalt or industrial pads. The entire FMC Willow portion of the APE is flat, and its eastern portion is almost entirely overgrown with grass. The eastern portion is also bisected from east to west by the Hetch Hetchy pipeline ROW, a 100-foot-wide corridor that has been excluded from the project and is not part of the APE.

In contrast, the western portion of the FMC Willow portion of the APE is almost completely covered in the remains of concrete industrial pads and asphalt access roads, some of which are lined with trees. The western section also includes areas that are currently used for staging remediation equipment and materials.

No historic-era resources were found within the FMC Willow portion of the APE, although approximately 30 feet north of the northern border of the APE is the Bayside Newark Cutoff (P-01-001783), a railroad

grade that was formerly a component of the Southern Pacific Railroad and is now owned by SamTrans. The Bayside Newark Cutoff has previously been evaluated for significance and was recommended eligible for listing in the NRHP.

No prehistoric resources have been previously recorded within the FMC Willow portion of the APE or a 0.50-mile radius around the APE, and none were identified during the field survey. Given its history of industrial use and previous ground disturbance, the APE is considered to have a low sensitivity for prehistoric resources.

On April 26, 2021, HELIX Archaeologist Katherine D. Thomas surveyed the Grand Park portion of the APE. The Grand Park portion of the APE consists of partially developed land surrounded by industrial and commercial buildings in the western section of the City of Newark. The Grand Park portion of the APE has been partially paved, and there is very little surface visibility present. Additionally, the unpaved areas are covered in grass, gravel, and equipment that further obscures the surface. A portion of a railroad spur evaluated by HELIX and found ineligible in 2017 is visible in the northern portion of the APE. The Grand Park portion of the APE is completely flat, with the exception of a small, raised area that has been recently created using fill from work being done elsewhere on the parcel. The Grand Park portion of the APE used to contain a warehouse, but that has been removed, and the area is currently being used for equipment storage.

No historic age or pre-contact resources have been previously recorded within the Grand Park portion of the APE, and none were found during the field survey. Therefore, the Grand Park portion of the APE is considered to have a very low sensitivity for historic age or pre-contact resources.

Senate Bill 18 Tribal Consultation

Senate Bill (SB) 18 requires that the City initiate consultation with any tribes listed on the NAHC's official contact list for an amendment of a General Plan. SB 18 requires the City to send a letter to each contact on the NAHC's SB 18 list, extending an invitation for consultation. Tribes have 90 days from receipt of the letter to request consultation. The City must also send a notice to all contacts 45 days prior to adopting or amending the General Plan regardless of whether prior consultation has taken place, but the notice does not initiate a new consultation process. Lastly, the City must send notice of a public hearing to all tribes who have filed a written request for such notice as least 10 days prior to the hearing. For the City of Newark, the following tribes previously submitted general request letters, requesting such noticing:

- Ohlone Indian Tribe;
- Indian Canyon Mutsun Band of Costanoan;
- Amah Mutsun Tribal Band of Mission San Juan Bautista;
- North Valley Yokuts Tribe;
- Muwekma Ohlone Indian Tribe of the SF Bay Area; and
- Costanoan Rumsen Carmel Tribe.

The proposed project includes a General Plan amendment, and formal invitations to participate in the SB 18 consultation process on the proposed project were sent by the City to six tribal representatives on October 20, 2020. Each tribe was provided a brief description of the project and its location, the contact information for the City's authorized representative, and a notification that the tribe has been invited to

consult with the City on this project in accordance with Government Code Section 65352.3.

Letters were sent the following representatives:

- Andrew A. Galvan, The Ohlone Indian Tribe;
- Ann Marie Sayers, Indian Canyon Mutsun Band of Costanoan;
- Irenne Zwierlein, Amah Mutsun Tribal Band of Mission San Juan Bautista;
- Katherine Erolinda Perez, North Valley Yokuts Tribe;
- Rosemary Cambra, Muwekma Ohlone Tribe of the SF Bay Area; and
- Tony Cerda, Costanoan Rumsen Carmel Tribe.

As of June 2022, no tribe has responded requesting consultation under SB 18.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

The PEIR concludes there are no NRHP or CRHR listed, determined, or potential archaeological sites, significant local, State or Federal historic properties, landmarks, etc., in or adjacent to the Specific Plan area. Additionally, there are no recorded archaeological resources, including prehistoric sites and no recorded, reported, or known Native American sites, villages, trails, traditional use areas, or contemporary use areas in, adjacent, or near the Specific Plan area. No historic resources have been formally recorded or reported in or near the Specific Plan area.

There is a possibility that potentially significant unrecorded archaeological resources, including prehistoric resources and human remains, as well as historic resources, and are present beneath the ground surface and could be exposed during construction activities.

Evaluation of Cultural Resources

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

d) Disturb any human remains, including those interred outside of formal cemeteries?

No New Impact. No prehistoric, historic-era, or paleontological resources have been previously recorded within the APE, and none were identified during the pedestrian survey. Given the APE's disturbed setting and long history of industrial use, there is a low potential of identifying Native American resources and a low to moderate potential of identifying historic-period resources during ground-disturbing activities associated with the proposed project.

A search of the NAHC's SLF returned a negative result, suggesting that there are no known Native American resources in the immediate vicinity, and to date, no responses have been received from the

Native American individuals who were contacted about the proposed project. The results of the project-specific CRA indicate there would be no impacts to significant cultural resources of prehistoric or historic age by the proposed project, and therefore no additional studies, archaeological work, or construction monitoring are recommended (see Appendix D for more detail). Although no cultural or historic age resources were identified during the field survey, ground disturbance during project construction could reveal unknown cultural or historic age resources below the ground surface. Measures contained in the Bayside Newark TOD Specific Plan MMRP (Mitigation Measure 4.4-1a) would be implemented to minimize potential impacts to cultural resources to a less-than-significant level. No new impact would occur for questions a), b), c), and d).

Bayside Newark TOD Specific Plan Mitigation Measure 4.4-1a (Subsurface Resources)

Prior to the issuance of grading permits for future development allowed within the Specific Plan area, project sponsors shall retain qualified archaeologists meeting the Secretary of the Interior's Professional Qualification Standards to train the construction crew on the mechanisms used to identify cultural resources and to caution them on the legal and/or regulatory implications of knowingly destroying cultural resources or removing artifacts or human remains from the project sites.

If subsurface deposits believed to be cultural or human in origin are discovered during the construction of future development projects within the Specific Plan area, then all work shall halt within a 200-foot radius of the discovery and they shall be evaluated by a professional archaeologist. If a potentially-eligible resource is encountered, then the archaeologist, lead agency, and project sponsor shall arrange for either: 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility and, if eligible, data recovery as mitigation.

If human remains of any kind are found during construction activities, all activities shall cease immediately and the Alameda County Coroner shall be notified as required by State law (Section 7050.5 of the Health and Safety Code). If the coroner determines the remains to be of Native American origin, he or she shall notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the most likely descendant(s) (MLD) to be consulted regarding treatment and/or reburial of the remains.

VI. GEOLOGY/SOILS

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	■
ii. Strong seismic ground shaking?	☐	☐	☐	■
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☐	■
iv. Landslides?	☐	☐	☐	■
b) Result in substantial soil erosion or loss of topsoil?	☐	☐	☐	■
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	■
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	☐	☐	☐	■
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■

Environmental Setting

A project-specific preliminary geotechnical investigation was prepared by Berlogar Stevens & Associates (BSA) and is included as Appendix E. Information pertinent to the project is summarized below.

Geology

The project site is located in the San Francisco Bay Area, and this region is known to be one of the most seismically active places in the United States. Although the project site is not located within an Alquist-Priolo Study Zone (i.e., active faults), the following three major active faults are located in the greater San Francisco Bay Area: the Hayward Fault, which is located approximately 6 miles east of the project site; the San Andreas Fault, which is located approximately 13 miles west of the project site; and the Calaveras Fault, which is located approximately 11 miles east of the project site.

Soils

The project site was subject to years of soil remediation activities and is barren except for remnant cement pads and cement and asphalt roads. The extensive soil remediation included the export of contaminated soils and import of clean fill so fill soils cover the majority of the site. Geologic deposits below the fill consist of Holocene Basin deposits. Basin Deposits are silty clay to clay deposits found at the distal edge of alluvial fans adjacent to the Bay Mud.

Site reconnaissance of the area did not indicate the presence of bedrock on the site. However, bedrock was encountered at shallow depths at the site during previous evaluations. The shallow bedrock appears to be continuous with two areas of bedrock hills (North Hill and South Hill) southwest of the site on the Cargill Salt property. These two bedrock hills, which are in line with the Coyote Hills, located about 3,600 feet northwest of the site, were previously investigated by BSA and BGC. The Coyote Hills are shown on the Preliminary Geologic Map Emphasizing Bedrock (Graymer, et. al., 1996). The Coyote Hills are mapped as consisting of Undivided Franciscan rocks, chert, greenstone, limestone and serpentinite.

With respect to the two bedrock hills southwest of the site, previous investigations of those hills by BSA and BGC indicated that the North Hill is composed of sandstone and claystone and is mantled with undocumented fill. The North Hill was partially covered with magnesia from salt production operations, which is reported to have been removed from the site. The South Hill is composed of serpentinite.

The shallow bedrock logged by BSA on the site consisted of slightly weathered to competent siltstone and sandstone of the Franciscan Assemblage. ERM logged weathered serpentine, consistent with Franciscan Assemblage bedrock, in their soil boring D2-A and test pit TP-5W at a depth of about nine feet below ground surface (bgs).

The site is blanketed by a layer of fill generally ranging in thickness from about two to five feet. Deeper fills, on the order of about eight feet deep, are present in areas where clearing of past structures and environmental investigation and remediation activities have been performed. The surficial fills in the western portion of the site are predominately silty to clayey gravels or sands in the upper 2 to 3 feet. The surface soils in the eastern portion of the site are predominately clays and silts. The fill contains crushed rock, concrete, and brick in several areas.

The alluvial soils underlying the fill consist of varying layers of lean silty to sandy clays, clayey to sandy silts, sand, and silty to clayey sands. The sandy layers were generally encountered between about 8 and 18 feet bgs, with sand deposits also encountered below about 38 feet in two of the four CPTs that extended to depths of at least 50 feet bgs. The granular soils are loose to medium dense, where present in the upper 10 to 20 feet of the site and medium dense to dense below. The fine-grained soils range in consistency from medium stiff to very stiff.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Geology and soils are discussed in Chapter 4.5 of the PEIR prepared for the Specific Plan (RBF 2011). The PEIR concludes that project construction could expose people or structures to potentially substantial adverse effects, including the risk of loss, injury, or death as a result of seismic-related ground shaking, liquefaction, or landslides and includes measures to reduce impacts to less than significant. The project

could also result in substantial soil erosion, the loss of topsoil, or be located on a geologic formation or soil that is unstable and includes measures to reduce impacts to less than significant.

The PEIR concluded that there are no identified faults running through the Specific Plan area, and there is no risk of ground rupture. Additionally, future development allowed by the Specific Plan would connect to the municipal sewer system and would not require the construction of septic tanks or an alternative wastewater disposal system.

Evaluation of Geology and Soils

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

   ii. Strong seismic ground shaking?

   iii. Seismic-related ground failure, including liquefaction?

   iv. Landslides?

No New Impact. Because no active earthquake faults transect the project site, there is no risk of ground rupture on the project site from known earthquake faults. However, the San Francisco Bay Area is one of the most seismically active places in the United States, and the project site will likely be subject to at least one moderate to severe earthquake and associated seismic shaking during the life of the planned development, as well as periodic slight to moderate earthquakes. Some degree of structural damage due to strong seismic shaking is expected at the site, but the impact of seismic-related ground shaking on the project site would be reduced if the project is constructed in compliance with the geotechnical engineering investigation recommendations and the California Building Code requirements, including seismic design codes.

Due to the relatively flat topography of the project site and surrounding area, the project site is not susceptible to landslides.

The project-specific preliminary geotechnical investigation identified potentially liquefiable soils in the southwest area of the project site to a depth of 25 feet or more that could result in seismically-induced ground failure from a substantial earthquake from nearby, off-site faults. Therefore, Bayside Newark TOD Specific Plan Mitigation Measure 4.5-1 would be implemented to reduce potential impacts to a less-than-significant level. No new impact would occur.

Bayside Newark TOD Specific Plan Mitigation Measure 4.5-1 (Geotechnical Investigation)

The ACWD regulates the construction, repair, and destruction of wells, exploratory holes, and other excavations located within the City of Newark under ACWD Ordinance No. 2010.01.

Future developers within the Specific Plan area shall have a design-level geotechnical engineering investigation performed for their individual property or properties prior to its (their) development. The mitigation measures specified by the design-level geotechnical engineering investigations shall become conditions to the issuance of grading permits for such individual property. The design-level geotechnical engineering investigations shall only address each specific individual property proposing construction unless future developers mutually agree to include more than one property in a single investigation.

The design-level geotechnical engineering investigations shall take into consideration the specific locations and types of development, as well as specific soil and rock conditions identified by subsurface investigation and laboratory testing. The likely mitigation measure recommendations of the design-level geotechnical engineering investigations regarding the design and construction of project-related development are regularly employed, have known and proven efficacy, and could include without limitation, one or more of the following:

- Removing the soft/loose soil by excavating the soil and backfilling the excavation with compacted soil, thus densifying the soft/loose soil;
- Supporting structures on deep foundations, such as piles or piers;
- Improving the soft/loose soils by various methods, such as dynamic deep compaction, constructing surcharge fills, installing wick drains, grouting, and other methods;
- Strengthening structures to withstand seismic shaking and differential ground settlement; and/or,
- Other methods as determined by the geotechnical engineer in the geotechnical report to be prepared for the sites.

With implementation of Bayside Newark TOD Specific Plan Mitigation Measure 4.5-1, impacts from seismic-related ground shaking, liquefaction, or landslides would be less than significant. No new impact would occur.

b) Result in substantial soil erosion or the loss of topsoil?

No New Impact. Construction activities on the project site, such as grading and excavation, could potentially result in increased erosion or loss of topsoil from wind or stormwater. While the project could be exposed to erosion hazards or loss of topsoil, as noted in the PEIR, erosion can be controlled through compliance with ACWD Ordinance No. 2010-01 as required by Bayside Newark TOD Specific Plan Mitigation Measure 4.5-2.

Bayside Newark TOD Specific Plan Mitigation Measure 4.5-2 (Soil Improvement)

Prior to any soil improvement measures and/or dewatering activities, the project geotechnical engineer(s) shall coordinate with the ACWD to ensure compliance with ACWD Ordinance No. 2010-01.

With implementation of Bayside Newark TOD Specific Plan Mitigation Measure 4.5-2, impacts related to soil erosion would be less than significant. No new impact would occur.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

No New Impact. The site-specific geotechnical investigation (Appendix E) assessed the potential for landslide, lateral spreading, subsidence, and liquefaction to occur, amongst other geotechnical considerations. While landslides were not identified as a concern, the site has low to moderate potential for lateral spreading, subsidence (settlement related to liquefaction), and a moderate to high potential for liquefaction.

While the project could experience liquefaction-induced field settlement and ground-surface disruption, implementation of Bayside Newark TOD Specific Plan Mitigation Measure 4.5-1 discussed under question a) of this section and adherence to the recommendations prescribed in the design-level geotechnical engineering investigation would reduce these impacts to a less-than-significant level. No new impact would occur.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

No New Impact. Moderately expansive soils were encountered in the surficial soils that blanket the site, which could result in structural damage. While the project could be exposed to impacts caused by unstable soils, implementation of Bayside Newark TOD Specific Plan Mitigation Measure 4.5-1 discussed under question a) of this section and adherence to the recommendations prescribed in the design-level geotechnical engineering investigation would reduce these impacts to a less-than-significant level. No new impact would occur.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No New Impact. The proposed project would connect to a municipal wastewater treatment system provided by the City of Newark and would not require septic systems or an alternative waste disposal system. Therefore, there would be no impact, and no new impact would occur.

VII. GREENHOUSE GAS EMISSIONS

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☐	■
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	■

Environmental Setting

The potential greenhouse gas (GHG) emissions impacts associated with implementation of the Specific Plan were evaluated in Chapter 4.6 of the PEIR. Additionally, a project-specific GHG emissions evaluation was completed as part of the Air Quality and Greenhouse Gas Emissions Technical Report for the FMC Willow and Grand Park Project, included as Appendix B to this Initial Study (HELIX 2021a). The results of the GHG evaluation are summarized below.

Climate Change Overview

Global climate change refers to changes in average climatic conditions over the entire Earth including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting light in but preventing heat from escaping, thus warming the Earth's atmosphere. These gases allow solar radiation (sunlight) into the Earth's atmosphere but prevent radiative heat from escaping.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

Greenhouse Gases

The GHGs defined under California's Assembly Bill (AB) 32 include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHG emissions to disperse around the globe. Because GHG emissions vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, because methane and N_2O are approximately 25 and 298 times more powerful than CO_2, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO_2 has a GWP of 1). CO_2e is a quantity that enables all GHG

emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_2e. Typically, the GWP ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 13, *Global Warming Potentials and Atmospheric Lifetimes*.

TABLE 13.
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-324a	14	1,430
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: IPCC 2007
HFC: hydrofluorocarbon; PFC: perfluorocarbon

GHG Emissions Regulatory Framework

Refer to the Air Quality and Greenhouse Gas Emissions Technical Report for the FMC Willow and Grand Park Project (Appendix B; HELIX 2021a) for detailed descriptions of regulations and plans related to GHGs.

California GHG Regulations

The primary legislation governing GHG emissions in California and directing the related actions taken by state and local agencies is AB 32, *California Global Warming Solutions Act of 2006*, and SB 32, *California Global Warming Solutions Act of 2006: emissions limit*.

AB 32 requires that CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB was directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions. As a follow-up to AB 32, SB 32 was passed by the California legislature in August 2016 to codify the Executive Order B-30-15 GHG emission reduction target of 40 percent below 1990 levels by 2030 and requires the State to invest in the communities most affected by climate change.

On December 11, 2008, CARB adopted the Scoping Plan (CARB 2008) as directed by AB 32. The Scoping Plan proposes a set of actions designed to reduce overall GHG emissions in California to the levels required by AB 32. Measures applicable to development projects include those related to energy-efficiency building and appliance standards, the use of renewable sources for electricity generation, regional transportation targets, and green building strategy. Relative to transportation, the Scoping Plan includes nine measures or recommended actions related to reducing vehicle miles traveled (VMT) and vehicle GHG emissions through fuel and efficiency measures. These measures would be implemented statewide rather than on a project-by-project basis.

In response to EO B-30-15 and SB 32, all state agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the Scoping Plan to reflect the 2030 target (CARB 2014). The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue driving down emissions. In December 2017, CARB adopted the *2017 Climate Change Scoping Plan Update, the Strategy for Achieving California's 2030 Greenhouse Gas Target,* to reflect the 2030 target set by EO B-30-15 and codified by SB 32 (CARB 2017b).

Regional and Local GHG Policies and Plans

The BAAQMD provides direction and recommendations for the analysis of GHG impacts of a project and approach to mitigation measures in its CEQA Guidelines (BAAQMD 2017a). The guidance provided in the handbook was used to prepare this analysis.

In October 2021, the Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) jointly adopted Plan Bay Area 2050 (MTC and ABAG 2021). The Plan Bay Area 2050 is comprised of 35 strategies to improve housing, the economy, transportation, and environment across the Bay Area's nine counties. The plan also meets all State and federal requirements for a Regional Transportation Plan and a Sustainable Communities Strategy.

The City adopted a Climate Action Plan (CAP) Initial Framework in 2010. The CAP Initial Framework presents a summary of actions the City has already taken towards the reduction of GHG emissions; summarizes the 2005 emissions inventory; presents actions the City, residents and businesses can take to further reduce emissions; sets reduction goals; and, describes a monitoring plan (City 2010).

The City General Plan Conservation and Sustainability element supports the CAP with goals, policies, and actions to reduce the City's contribution to climate change by encouraging TOD, increasing transportation options, and planning for rising sea levels. The General Plan's goals and policies for building energy and water efficiency, and for conservation and management of the City's tree resources and urban forest also support the CAP and statewide GHG reduction goals (City 2013).

Methods

Construction Emissions

GHG emissions from the project's construction activities were calculated using CalEEMod, version 2020.4.0. CalEEMod is a computer model used to estimate air emissions resulting from land development projects throughout the state of California. CalEEMod was developed by CAPCOA in collaboration with the California air quality management and pollution control districts, primarily the South Coast Air Quality Management District (SCAQMD). CalEEMod utilizes emission factors from CARB's OFFROAD and EMFAC models for off-road equipment and on-road vehicles, respectively. The calculation methodology, source of emission factors used, and default data is described in the CalEEMod User's Guide Appendices A, D, and E (CAPCOA 2021).

Based on a conservative estimate (earliest and highest intensity of construction activities) of the project construction timeline provided by the project applicant, Phase 1 construction would begin in April 2023

and be completed in October 2025 for a total construction period of 30 months. Construction of Phase 2 buildings would commence with grading as early as August 2023 and is anticipated to be complete by December 2025 but could be completed as early as October 2025 (27 months). Phase 2 construction would overlap the Phase 1 construction activities. Construction of the project would result in emissions of GHGs from the use of diesel-powered equipment, from worker and vendor vehicles traveling to and from the project site, and from trucks hauling debris and soil. Construction would require heavy equipment during site preparation, grading, underground utilities, paving and building construction. Construction equipment estimates are based on default values in CalEEMod, with additional equipment added for excavation for underground utilities, based on assumptions used for similar projects. The number of worker and vendor trips is based on CalEEMod defaults for each constructing activity. During demolition, an export of approximately 12,680 tons of old concrete/asphalt is anticipated. During grading, an import of approximately 77,700 cubic yards of soil is anticipated.

Operation Emissions

GHG emissions from long-term operation of the project were estimated using CalEEMod. Operational emissions include area sources, energy sources, mobile sources (vehicle trips), solid waste sources, and water/wastewater sources.

Area Sources

Area sources include landscape equipment, consumer products, and hearths (e.g., fireplaces, woodstoves). No hearths (including woodstoves and fireplaces) are included in the design of the proposed project. The CalEEMod default values for landscape equipment and consumer products were used.

Energy Sources

GHGs are emitted as a result of activities in buildings for which electricity and natural gas are used as energy sources. GHGs are generated during the generation of electricity from fossil fuels off-site in power plants. These emissions are considered indirect and are calculated in CalEEMod as associated with a building's operation.

Energy source emissions were estimated assuming implementation of energy-reducing project design features to comply with the 2019 Title 24 standards which include a requirement for new residential buildings with three or fewer residential floors to have on-site generation of electricity through photovoltaic (solar) panels. The project's mixed-use affordable housing/commercial building and some of the townhome buildings have four or more residential floors and would not require solar panels. The project's remaining residential buildings (234 DU) total approximately 365,038 sf of conditioned space (total floor area minus garage area, as listed in the project floor plans) and would require solar panels producing a minimum of 436 kilowatts (kW). The annual electricity generated by a rooftop mounted solar power system varies by the climate, amount of sunlight available per day, the pitch and orientation of the roof, and the efficiency of the electrical transmission. Assuming a capacity factor of 20 percent, which accounts for climate, daylight hours, roof pitch and orientation, and transmission loss, the power produced by the project's solar panels would be approximately 860,799 kilowatt-hours (kWhr) per year. The complete solar power requirement calculations are included with the Air Quality and GHG Emissions Technical Report CalEEMod output files.

Mobile Sources

The emissions from mobile sources were calculated using the project ADT estimate of 1,824 trips after internalization reductions (Fehr & Peers 2021) and CalEEMod default trip lengths. However, the trip generation analysis used older project data that assumed more residential units (377) and retail space (12,100 SF) than the proposed project. Trip generation rates used in the modeling were calculated from the trip generation data. The trip generation rates include trip reductions for internalization. Therefore, no pass-by or linked trip reductions were included in the modeling.

Solid Waste Sources

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. CalEEMod determines the GHG emissions associated with disposal of solid waste into landfills. Portions of these emissions are biogenic. CalEEMod methods for quantifying GHG emissions from solid waste are based on the IPCC method using the degradable organic content of waste. Existing land use GHG emissions associated with waste disposal were all calculated using CalEEMod's default parameters. A conservative 25 percent solid waste diversion rate was applied in CalEEMod to the new construction and redevelopment that would occur to account for mandatory compliance with AB 341 that is not included in the model defaults.

Water and Wastewater Sources

The amount of water used, and wastewater generated, by a project has indirect GHG emissions associated with it. These emissions are a result of the energy used to supply, distribute, and treat the water and wastewater. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit both methane and nitrous oxide. The default CalEEMod water use assumptions were used for the GHG emissions estimates. For the project's water and wastewater GHG emissions, an overall 20 percent reduction in water use was applied in the CalEEMod mitigation section to account for recent requirements of the 2019 California Green Building Standards Code (CALGreen).

Levels of Significance

The BAAQMD has adopted GHG thresholds of significance that a lead agency may use for determining the significance of a land use development project's GHG impacts. For development project, the BAAQMD recommends an efficiency threshold of 4.6 metric ton (MT) or carbon dioxide equivalents (CO_2e) per service population year for a project's long-term operational GHG emissions (BAAQMD 2017a).[4] The BAAQMD's GHG thresholds were developed to meet the year 2020 statewide GHG emissions targets as mandated by AB 32 and implemented by the CARB Scoping Plan. The BAAQMD has not adopted guidance or revised thresholds to account for a GHG reduction target beyond 2020. Therefore, this analysis compares the project's emissions to a reduced threshold corresponding to the SB 32 reduction target of emissions 40 percent below 1990 levels by 2030. Accordingly, a threshold reduced by 4.98 percent for each year between 2020 and 2030 would meet the mandates of SB 32. The first full year of operation for the project is anticipated to be 2025. Therefore, a threshold 22.6 percent

[4] Service population is the total number of residents living in an area plus the employees working in the same area.

below the BAAQMD threshold of 4.6 MT CO_2e per service population per year (or 3.56 MT) is used in this analysis.

The BAAQMD has not adopted a threshold for determining the significance of a project's construction GHG emissions. However, the BAAQMD recommends quantification and disclosure of GHG emissions that would occur during construction.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

GHG Emissions are discussed in Chapter 4.6 of the PEIR prepared for the Specific Plan. The PEIR concluded that the Specific Plan's contribution to regional GHG emissions would be potentially significant. Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.6-1 requires implementation of project design features to reduce building energy and transportation related GHG emissions and would reduce the impact to less than significant. The PEIR which concluded that the Specific Plan would not conflict with the City's CAP.

Evaluation of Greenhouse Gas Emissions

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

No New Impact.

Construction Emissions

Project construction GHG emissions were estimated using CalEEMod as described in the methods, above. Emissions of GHGs related to the construction of the project would be temporary. As shown in Table 14, *Construction GHG Emissions*, the total estimated GHG emissions associated with construction of the project would be 5,065 MT CO_2e.

TABLE 14.
CONSTRUCTION GHG EMISSIONS

Project Phase and Year	Emissions (MT CO_2e)
Phase 1 2023	1,519.0
Phase 1 2024	2,333.2
Phase 1 2025	1,059.3
Phase 2 2025	153.4
TOTAL	**5,064.9**
Amortized Emissions (Total Emission/30 Years)	*168.8*

Source: CalEEMod, output data is provided in Appendix A.
Notes: Totals may not sum due to rounding.
MT = metric ton; CO_2e = carbon dioxide equivalent

Construction period emissions are typically amortized (i.e., averaged) over the anticipated 30-year lifespan of the project buildings. Averaged over 30 years, the proposed construction activities would

contribute 168.8 MT CO_2e emissions per year. As noted above, BAAQMD has not adopted a threshold for determining the significance of a project's temporary construction GHG emissions. However, anticipated construction emissions for the project are provided above for informational purposes. Impacts would be less than significant, and no new impact would occur.

Operation Emissions

The project's operational GHG emissions and the existing land use GHG emissions were estimated using CalEEMod as described in methods, above. The project's net annual operational emissions would be the total project annual emissions for the first year of full buildout, after completion of both Phase 1 and Phase 2 in 2025. As shown in Table 15, *Total Operational GHG Emissions*, the project would result in approximately 2,024 MT CO_2e per year.

For comparison with the BAAQMD efficiency threshold, adjusted for the year 2026, the project's total operational emissions were divided by the project's estimated future service population. Based on the emissions modeling, the CalEEMod default population density for condos/townhomes for Alameda County would be 2.86 persons per DU, and the project's future residential population would be approximately 1,058 residents. From information provided by the project applicant, the project commercial retail space would result in approximately 6 employees. Therefore, the projects estimated service population would be 1,065.

TABLE 15.
TOTAL OPERATIONAL GHG EMISSIONS

Project Phase and Source	Emissions (MT CO_2e/year)
Phase 1 Area	4.2
Phase 1 Energy	410.6
Phase 1 Vehicular (Mobile)	1,371.9
Phase 1 Solid Waste	61.8
Phase 1 Water and Wastewater	38.1
Phase 1 Subtotal[1]	1,886.5
Phase 2 Area	0.3
Phase 2 Energy	31.8
Phase 2 Vehicular (Mobile)	96.5
Phase 2 Solid Waste	4.7
Phase 2 Water and Wastewater	4.4
Phase 2 Subtotal[1]	137.7
Total Emissions (Phase 1 Subtotal + Phase 2 Subtotal)[1]	2,024.2
Service Population	1,065
Emissions Per Service Population[2]	**1.90**
Threshold (MT CO_2e per service population per year)	*3.56*
Exceed Threshold?	***No***

Source: CalEEMod, output data is provided in Appendix B.

[1] Totals may not sum due to rounding.

[2] Net emissions per service population = total emissions divided by the estimated future service population of 1,098.

MT = metric ton; CO_2e = carbon dioxide equivalent

As shown in Table 15 above, the project's per capita emissions would be 1.90 MT CO_2e per year, below the adjusted threshold of 3.56 MT CO_2e per service population per year. Therefore, the project would not generate GHG emissions that may have a significant impact on the environment, and the impact would be less than significant and would not exceed the significance determination in the PEIR. No new impact would occur.

Mitigation Measures

The Bayside Newark TOD Specific Plan PEIR included Mitigation Measure 4.6-1, which included a list of project design features that were intended to reduce the Specific Plan's GHG emissions to below the 4.6 MT/SP threshold. The proposed project includes mandated project-specific design features, including solar electricity generation, low water use plumbing fixtures, water efficient landscaping and irrigations, and solid waste diversion. In addition, the project trip generation analysis accounts for trip reductions resulting from the project's mixed land use (residential and local serving commercial/retail; Fehr & Peers 2021). As shown in Table 15, above, incorporation of these project design features would achieve the same goal as Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.6-1, and the project's emissions would be below the threshold. Therefore, no mitigation is required, and no new impact would occur.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No New Impact. There have been no updates to the City's CAP Initial Framework or GHG reduction-related policies in the General Plan since the PEIR was certified in 2011. Since the project would be consistent with the Specific Plan's intent for mixed-use TOD, the project would be consistent with the CAP Initial Framework and General Plan. In addition, because the growth in the City's housing and population as a result of the project would be consistent with the Specific Plan, the project would be consistent with the growth assumptions used to develop the *Plan Bay Area 2050*.

The project design features listed in Section 1.4 of Appendix B would support the policies included in the 2013 General Plan (2013). These General Plan policies include:

Action CS-3.E Water Efficient Landscaping. Continue to implement the City's Bay Friendly Landscaping Guidelines for water-efficient landscaping, including low water use plants and more efficient irrigation systems. Adopt more stringent outdoor water use policies for individual development proposals where feasible.

Policy CS-3.2. Water Conservation Standards. Promote conservation through development standards, building requirements, irrigation requirements, landscape design guidelines, and other applicable City policies and programs.

Policy CS-5.1 Linking Land Use and Transportation. Encourage land use and transportation patterns that reduce dependence on automobiles. This includes siting well-designed higher-density, mixed-use development near the proposed Bayside Newark Rail station and in other areas with frequent transit service.

Policy CS-5.2 Pedestrian and Bicycle Friendly Design. Ensure that new development is planned and designed to facilitate walking and bicycling as well as driving. This can potentially reduce the number of vehicle trips and related GHG emissions.

Policy CS-6.2 Encouraging Greener Construction. Encourage greener construction methods and greater use of recycled-content materials in new residential, commercial, and industrial construction projects in accordance with the latest CalGreen building standards.

Policy CS-7.1 Reducing Energy Use. Support measures to reduce energy consumption and increase energy efficiency in residential, commercial, industrial, and public buildings.

Policy CS-7.3 Designing for Energy Efficiency. Support building design, site planning, and subdivision design methods that reduce heating and cooling costs and achieve greater energy efficiency.

As discussed in question a), above, the project would not exceed the BAAQMD's project level thresholds developed to meet the reduction mandates of AB 32 or the adjusted 2023 threshold to meet the reduction mandates of SB 32. Therefore, the project would be consistent with the CARB Climate Change Scoping Plan developed to implement the mandates of AB 32 and SB 32.

In addition, if a future transit project is approved and constructed using the Bayside Newark Rail Corridor, then the project's future residents would be within 0.5 mile of the future train station and the project would be considered TOD. The transportation sector is the largest source of GHG emissions in the state and in the San Francisco Bay Area. While Plan Bay Area 2050 seeks to reduce the overall need for vehicle trips, it also recognizes that every trip is different and that cars will continue to be a transportation option into the future. In addition to the strategies that reduce driving trips, the plan also explores strategies that can make those remaining auto trips as sustainable as possible by expanding clean vehicle initiatives. The long lifespan of most vehicles presents an opportunity for Bay Area residents to retire their older, more polluting vehicles in exchange for rebates to buy zero-emission vehicles (MTC and ABAG 2021).

Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and impacts would be less than significant and would not exceed the conclusions in the PEIR. No new impact would occur.

VIII. HAZARDS AND HAZARDOUS MATERIALS

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	■
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	■
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	■
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	■
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	■
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	■

Environmental Setting

Hazards and hazardous materials are discussed in Chapter 4.7 of the PEIR (RBF 2011) prepared for the Specific Plan. The project site has a history of soil and groundwater contamination associated with previous land use. The project site was historically in industrial land uses as chemicals were manufactured and stored on-site from 1942 to 1995. FMC Corporation is the property owner responsible for the site cleanup efforts and submits all remediation documentation for this project site in electronic format to the State Water Resources Control Board's GeoTracker database, pursuant to the California Code of Regulations (Title 23, Section 3890, *et.seq*.). These files are available to the public and can be accessed at the State's database by searching by File Number (01S0131), address (8787 Enterprise Drive, Newark), or site name (FMC Corp – Newark) (SWRCB 2021).

Soil Remediation

Soil remediation on the project site began in 2002 in a small area in the northeast corner of the project site containing phosphorus impacted soils. Remediation in this area was conducted by isolation using an asphalt cap (P4 Cap). Soil remediation activities continued in May of 2015 in accordance with Work Order No. R2-2015-0017 by the San Francisco Regional Water Quality Control Board (RWQCB). Following soil removal activity and P4 cap construction, FMC Corporation submitted a Risk Management Plan (RMP) in August of 2019 (ERM 2019). The RMP was developed to manage and set procedures for any unexpected threats from soil or groundwater during future site development. The RMP provides for long term protection, inspection, monitoring, and maintenance of the P4 Cap. The RMP was approved in September of 2019 (SWRCB 2021). In December of 2019, the asphalt cap was removed and replaced by a reinforced concrete cap. The new cap, which consists of an 8-inch steel-reinforced concrete cap installed over 24-inch minimum compacted subgrade material and a witness layer, was completed in January 2020 (ERM 2021).

Remediation of soils on the FMC Willow portion of the project site was completed between August 2019 and November 2019, in which all excavated areas were backfilled with approved clean imported material to grades specified in approved workplans. A letter from the RWQCB dated November 27, 2019, stated that concentrations of chemicals in soils at the Willow Parcel had reached acceptable risk based on cleanup levels, and no further remedial action was necessary within the Willow Area (RWQCB 2019).

Remediation of soils on the previously approved Grand Park portion of the project site was conducted between January and October 2020. FMC Corporation submitted a Soil and Shallow Groundwater Remedial Action Completion Report – Phase 1 Area to the San Francisco Bay RWQCB on February 5, 2021, that addressed the Grand Park area (referred to as the Park Redevelopment Area) in the report. The report requests that the San Francisco Bay RWQCB approve the completion of the Phase 1 Area work and issue a No Further Active Remediation for soil letter for this portion of the project site. The San Francisco Bay RWQCB issued a Report Acceptance letter on April 16, 2021, stating that the agency has no concerns with the remedial activities that were performed but prefers not to make a formal determination on further remedial action for soil until all remedies for the Park Redevelop Area are complete (SWRCB 2021). Soil remediation activities are ongoing in the Grand Park portion of the project site. Additionally, the purpose of the reconfiguration of the previously approved Grand Park site is to ensure that no residential dwellings are developed on the remediation site.

Groundwater Remediation

FMC Corporation submitted a Shallow Groundwater Interim Remedial Action Completion Report to the San Francisco Bay RWQCB on June 1, 2020, for the FMC Willow portion of the project site (ERM 2020). Based on the documentation presented in the report, FMC requested that the RWQCB approve the Interim Remedial Action Completion Report and concur that the shallow groundwater Interim Remedial Action is complete for the affected area (including the FMC Willow portion of the project site). Groundwater remediation activities in the Willow and Park Redevelopment areas are ongoing.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Impacts associated with hazardous materials identified in the certified PEIR include risks to the public or the environment as a result of developing the sites included on lists of hazardous materials sites, routine transport, use, or disposal of hazardous materials, or foreseeable or accidental conditions involving the release of hazardous materials into the environment. Measures include requiring regulatory oversight of the contaminated property to determine that the remediation and mitigation measures, and the proposed land uses are sufficient to ensure the property, proposed development and design do not pose an unacceptable risk to human health.

Evaluation of Hazardous Materials

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No New Impact. During construction, oil, gasoline, diesel fuel, paints, solvents, and other hazardous materials would be used. The routine transport, use, and disposal of hazardous materials are subject to local, State, and federal regulations to minimize risk and exposure. If spilled, these substances could pose a risk to the environment and to human health. However, both federal and State laws include provisions for the safe handling of hazardous substances. Following construction, no hazardous materials use or storage would be expected other than minor amounts of residential cleaning and landscaping chemicals. No existing or proposed schools are within 0.25 mile of the project site. Therefore, impacts from transport of, accidental release of, or emissions from hazardous materials would be less than significant for questions a), b), and c). No new impact would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No New Impact. The project site has a history of hazardous materials contamination associated with previous land uses that may create a significant hazard to the public or the environment if not appropriately remediated. The San Francisco Bay RWQCB provides regulatory oversight of the properties within the Specific Plan area, including the project site, and has participated in ongoing coordination to remediate the project site (SWRCB 2021).

As discussed above, soil remediation on the project site began in 2002 in a small area in the northeast corner of the project site containing phosphorus impacted soils. Remediation in this area was conducted by isolation using an asphalt cap (P4 Cap). Following soil removal activity and P4 cap construction, FMC Corporation submitted an RMP in August of 2019 (ERM 2019). The RMP sets forth health and safety procedures and pollutant management protocols to be followed during construction or maintenance activities within the Willow Area. The RMP also sets forth procedures for long-term management of

residual pollutants in the Willow Area to ensure protection of human health and the environment. The RMP states that all buildings constructed within the Willow Area must have vapor intrusion mitigation systems installed under the foundations to mitigate potential health risks from potential vapor intrusion of volatile contaminants and that no buildings shall be constructed on the P4 Cap area in the Willow Area. The RMP was approved in September of 2019 (SWRCB 2021). The RMP, including any addenda, revisions or amendments approved by the San Francisco Bay RWQCB, is incorporated in the deed restriction for the Willow Area, recorded on November 19, 2019. The San Francisco Bay RWQCB anticipates an RMP and deed restriction would be developed for the Park Area before the land is redeveloped.

In December of 2019, the asphalt cap was removed and replaced by a reinforced concrete cap. The new cap, which consists of an 8-inch steel-reinforced concrete cap installed over 24-inch minimum compacted subgrade material and a witness layer, was completed in January 2020 (ERM 2021). In compliance with the Mitigation Measure 4.7-1a of the PEIR, annual inspections of the P4 Cap are conducted by a qualified engineer that is a duly authorized representative of FMC, and the inspection conducted in January 2021 by ERM concluded that there were no action items for repairs for the 2021 maintenance year (ERM 2021). The property owner of the Willow area is responsible for notifying and repairing the P4 Cap if damaged by the property owner or its designee as reported in the Operation and Maintenance (O&M) Report. FMC, former property owner, is responsible for ensuring the annual inspection of the P4 Cap and reporting in the O&M Report is completed by qualified personnel.

A letter from the RWQCB dated November 27, 2019, states that FMC Corporation has completed soil remediation within the Willow Parcel for soils impacted by historic site operations. As a result, concentrations of chemicals in the Willow parcel soils have reached acceptable risk based cleanup levels, and no further remedial action is required in the Willow Area (RWQCB 2019). Soil remediation activities within the Park Redevelopment Area are ongoing.

For the groundwater remediation on site, a Shallow Groundwater Interim Remedial Action Completion Report was submitted to the San Francisco Bay RWQCB on June 1, 2020, requesting that the RWQCB approve the Interim Remedial Action Completion Report and concur that the shallow groundwater Interim Remedial Action is complete for the affected area (ERM 2020). Groundwater remediation activities in the Willow and Park Redevelopment areas are ongoing.

The San Francisco Bay RWQCB has been overseeing the soil and groundwater investigation and remediation of the project site, and residential use of the site would not present an unacceptable risk to human health and the environment with the implementation of appropriate mitigation measures. While maintenance and monitoring of the P4 Cap is ongoing, the P4 Cap is located within the area designated for the future Transit Station, and no residential homes are proposed to be developed over or adjacent to the P4 Cap. However, because the site was previously developed and maintenance of the P4 Cap is ongoing, Bayside Newark TOD Specific Plan Mitigation Measures 4.7-1a, -1b, and 1c would be implemented to avoid, minimize, and mitigate any hazardous materials impacts to the public and the environment. No new impact would occur.

Bayside Newark TOD Specific Plan Mitigation Measure 4.7-1a (Environmental Contamination)

Prior to the issuance of grading or building permit for an individual property within the Specific Plan area with known, suspected, or potential residual environmental contamination, the property owner shall, to the extent such activities have not previously been performed by the

property owner pursuant to the requirements of the San Francisco Bay Regional Water Quality Control Board (RWQCB) or other overseeing agency under applicable environmental laws (Oversight Agency), do all of the following:

1) Summarize available information regarding the magnitude and extent of soil and groundwater contamination at the subject property;

2) Perform a data gap analysis;

3) Based on the results of the data gap analysis, determine whether any additional investigation is needed to fill data gaps and, if so, propose and perform such investigation with the approval of the Oversight Agency;

4) Provide either a Health Risk Assessment (HRA) or Feasibility Study (FS) containing an HRA to summarize potential risks to human health and the environmental posed by the contamination with respect to the proposed development;

5) Based on the HRA or as set forth in the FS, develop remedial options to address the identified risks based upon the proposed development, which remedial option may include engineering or institutional controls, and tentatively select the most appropriate remedial option to ensure that the proposed development will not present an unacceptable risk to human health or the environment as required by applicable environmental laws, as well as procedures for proper management of contaminated soil and groundwater that may be encountered during development; and

6) Submit a report to the Oversight Agency for review and regulatory approval of the proposed remedial plan, including engineering and/or institutional controls, under applicable environmental laws.

Bayside Newark TOD Specific Plan Mitigation Measure 4.7-1b (Site Clearance)

Prior to grading permit issuance, areas to be graded shall be cleared of debris, significant vegetation, pre-existing abandoned utilities, buried structures, and asphalt concrete.

Bayside Newark TOD Specific Plan Mitigation Measure 4.7-1c (Imported Soils)

Prior to the import of a soil to a particular property within the Specific Plan area as part of that property's site development, such soils shall be sampled for toxic or hazardous materials exceeding applicable Environmental Screening Levels for the proposed land use at such a property as required by the Oversight Agency prior to importing to such a property.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No New Impact. The project site is not located in an Airport Land Use Plan area, and no public or private airfields are within two miles of the project site. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area, and there would be no impact for questions e) and f). No new impact would occur.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No New Impact. The City is a cooperating agency in two emergency response plans: the Alameda County Emergency Operations Plan (Alameda County 2012) and Union City/Newark Multi-Jurisdiction Hazard Mitigation Plan (Tetra Tech 2016) as described above. Both plans were reviewed during preparation of this Initial Study. Implementation of these plans would not be affected by the proposed project. Primary access to the project site is via Willow Street and Enterprise Drive, which are fully paved and functional roadways, and no off-site road improvements that could interfere with an adopted emergency plan or evacuation plan would be necessary for project implementation. Therefore, impacts would be less than significant, and no new impact would occur.

h) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

No New Impact. The project site is not located in or near a State Responsibility Area (SRA) or a Very High Fire Hazard Zone of a Local Responsibility Area (LRA; CAL FIRE 2021). Site topography is flat and fuels adjacent to the site following project construction would be limited to a small amount of fine herbaceous fuels. The site would receive adequate levels of fire protection from the Alameda County Fire Department, and adequate site ingress and egress would be provided. Any potential impacts would be less than significant, and no new impact would occur.

IX. HYDROLOGY AND WATER QUALITY

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements	☐	☐	☐	■
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	■
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	■
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	■
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	■
f) Otherwise substantially degrade water quality?	☐	☐	☐	■
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	■
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	■
i) Expose people or structures to a significant risk of loss, injury or death involving flooding including flooding as a result of the failure of a levee or dam?	☐	☐	☐	■
j) Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	■

Environmental Setting

Hydrology and water quality are discussed in Chapter 4.8 of the PEIR prepared for the Specific Plan (RBF 2011). The project site has undergone soil remediation and reflects the history of past hydrologic manipulation. Precipitation and municipal water are the only sources of water for the study area. Precipitation collected on the site may pond in low areas or flow off site to adjacent parcels where it may percolate into the ground or evaporate.

An LID storm drain system comprised of bio-retention areas, curbs and gutters along the roadways, and underground storm drainpipes would be installed as part of the proposed project storm water management plan (CBG 2021). The proposed project would install storm drainpipes throughout the project site that would connect to existing City-owned storm drains located within Enterprise Drive and Willow Street. This storm drain system is designed to convey surface runoff to an outfall located within the southwestern corner of the Specific Plan area and, ultimately, to the San Francisco Bay. The project site would be delineated into 50 DMAs with approximately 23,024-sf of bioretention treatment areas proposed within the project site.

FEMA flood insurance rate maps were reviewed for the project's proximity to a 100-year floodplain. The project site is within FEMA panel 06001C0443G effective 8/3/2009. The majority of the project site is located within an area classified as an area of minimal flood hazard. The east side of the site is located in Zone X and has a 0.2 percent annual chance of flooding. A portion of the site along the western boundary, including the majority of the Grand Park, is within an area classified as Zone AE which indicates this area has a 1 percent annual chance of flooding and is within a 100-year floodplain (FEMA 2021). The City of Newark Municipal Code (Section 15.40.51 Newark Municipal Code) has flood elevation standards for lands within special flood hazard areas as defined by FEMA. These standards include requirements such as minimum elevations for finished floors above building pads and top of curb grades.

The project site is in the inundation areas for the James H. Turner and New Calaveras dams, all of which are east of the project site and classified as extremely high downstream hazard dams because their failure could result in a significant loss of life and property damage. The California Division of Safety of Dams inspects each dam on an annual basis to ensure the dam is safe, performing as intended, and is not developing problems.

The Specific Plan is within the coverage area for the Municipal Regional Stormwater NPDES General Permit administered by the San Francisco Bay RWQCB. The permit applies to projects disturbing one acre or more of land. The terms of the permit usually provide requirements and standards for categories such as municipal maintenance, public outreach, illicit discharge controls, industrial and commercial discharge controls, and new development discharge controls.

The Alameda County Flood Control and Water Conservation District (ACFC) works specifically to protect County citizens from flooding and enforces pollution control regulations governing County waterways. The ACFC has a Hydrology and Hydraulics Manual that outlines the ACFC's requirements for new development and modifications of existing flood control systems.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Hydrology, Drainage, and Water Quality are discussed in Section 4.8 of the PEIR prepared for the Specific Plan. The PEIR concluded that the Specific Plan would not violate water quality standards or waste discharge requirements, as all elements of the project would be required to comply with the requirements of the NPDES General Permit which includes implementation of best management practices to prevent or minimize environmental impacts and ensure that discharges during the construction phase of the project would not cause or contribute to the degradation of water quality in receiving waters, reducing construction-related water quality impacts to less than significant. The PEIR

contains measures to minimize impacts to water quality as a result of altered drainage patterns that may cause flooding and may also result in cumulatively considerable hydrology and water quality impacts. Future storm drainage lines for the project would be designed to carry flow to a new outfall being created by others within the southwestern corner of the Specific Plan area. No new drainage outfall was installed for Drainage 1.

Evaluation of Hydrology and Water Quality

a) Violate any water quality standards or waste discharge?

No New Impact. Site clearing, grading, excavation, and construction activities have the potential to impact water quality through soil erosion and increased silt and debris discharged via surface runoff. Additionally, the use of construction materials such as fuels, solvents, and paints may present a risk to surface water quality. Temporary storage of construction materials and equipment in work areas or staging areas could create the potential for a release of hazardous materials, trash, or sediment to the storm drain system. Since construction of the proposed project would result in disturbance of an area greater than one acre, the project applicant would be required to enroll for coverage under the Storm Water Construction General Permit for the NPDES program. The Storm Water Construction General Permit requires the submittal of Permit Registration Documents to the SWRCB prior to the start of construction and a Notice of Intent (NOI), risk assessment, site map, annual fee, signed certification statement, SWPPP, and post-construction water balance calculations would be included in the submittal. A project-specific SWPPP would be prepared and BMPs would be implemented during construction. Typical BMPs would include diversion of runoff from disturbed areas, protective measures for sensitive areas, temporary soil stabilization measures, storm water runoff quality control measures, concrete waste management, watering for dust control, and installation of perimeter silt fences, as needed. New requirements by the SWRCB also require the SWPPP to include post-construction treatment measures aimed at minimizing stormwater runoff.

Additionally, the project site is within the existing urban area of the City served by urban stormwater facilities and would be subject to all of the conditions of the City's Municipal Code and ACFC's requirements for new development and modifications of existing flood control systems. With compliance of all the NPDES permit conditions, City code conditions, and ACFC's requirements, water quality impacts from the proposed project would be less than significant. No new impact would occur.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level?

No New Impact. Water use for the proposed project would be obtained from the ACWD, which utilizes treated groundwater as a source of its local supply along with other sources. The Specific Plan is included in ACWD's forecast and water supply planning, and it would not increase water shortages from what has already been factored into ACWD's planning. While the project would result in additional impervious surfaces on the site that can interfere with the natural groundwater recharge process, the Alameda Creek Watershed is the primary source of recharge for the San Francisco Bay Area Basin, and rainfall and applied water provide a local recharge to a lesser extent. Therefore, the proposed development would not substantially reduce groundwater recharge, and impacts would be less than significant. No new impact would occur.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river that would result in substantial erosion or siltation on or off-site?

No New Impact. Implementation of the proposed project would increase impervious surfaces on site by 38 percent which could potentially increase stormwater generation and runoff from the project site. However, the proposed project would be split into 50 DMAs with approximately 23,024-sf of bioretention treatment areas to control and contain stormwater runoff and reduce the potential for erosion or siltation on- or off-site. Additionally, following project construction and during the life of the project, areas would be paved or landscaped which would stabilize soils. Therefore, impacts would be less than significant. No new impact would occur.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off-site?

No New Impact. Implementation of the project would increase impervious areas within the project site by approximately 38 percent, subsequently reducing absorption rates in some areas and altering the site's existing drainage pattern and percolation rates. By increasing the impervious area and channelizing stormwater runoff, the rates and volumes of runoff would increase.

The Specific Plan delineates the 205-acre Specific Plan area into three drainage shed areas. The eastern portion of the project site lies within drainage Shed 1 and the western portion of the project site lies within drainage Shed 2. However, as noted in Exhibits 8.2 and 8.3 of the Specific Plan, the drainage shed boundaries may be adjusted to optimize drainage. Therefore, the proposed project has been designed to include 50 DMAs and an on-site storm drain system within the project site to provide flood control and to ensure the storm water system can adequately accommodate the proposed project. Additionally, Bayside Newark TOD Specific Plan Mitigation Measure 4.8-4a would be implemented to further reduce potential stormwater runoff impacts.

Bayside Newark TOD Specific Plan Mitigation Measure 4.8-4a (Hydrology)

Plans submitted for grading permits shall include a detailed hydrology report. The report shall include calculations regarding the anticipated volume of stormwater runoff generated by the proposed development, and shall demonstrate that adequate stormwater conveyance and capacity is available in the existing facilities selected depending on the location of the proposed development (i.e., the Line F-1 channel, the City's existing outfall into the Line F-1 channel, the existing human-created tidal channel that is tributary to Newark Slough, and existing City facilities in Willow Street). The hydrology report shall be subject to review and approval by the City Engineer.

If the hydrology report determines that the existing facilities do not have adequate stormwater conveyance and capacity to serve the proposed development, then the project applicant shall develop a detailed stormwater detention plan for the retention/detention of stormwater runoff on the project site. The stormwater detention facilities shall be designed with adequate capacity to ensure that that stormwater generated on the project site during a peak storm event is retained at a rate that would ensure that discharges from the site do not exceed pre-construction levels. All detention facilities shall be developed in conformance with the City's

standards and the standards of the Alameda County Flood Control and Water Conservation District. The plans and specifications of the proposed detention facilities shall meet the standards of the City Engineering Department as an adequate engineering product. The construction of stormwater detention facilities may be phased to correspond with development of the project site over time, provided that adequate detention is provided at all times to ensure that runoff from the site does not exceed pre-construction levels.

With implementation of Bayside Newark TOD Specific Plan Mitigation Measure 4.8-4a, impacts would be less than significant. No new impact would occur.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

f) Otherwise substantially degrade water quality?

No New Impact. The proposed project would install storm drainpipes throughout the project site that would connect to existing City-owned storm drains located within Enterprise Drive and Willow Street. Stormwater from the proposed project would be designed to flow to a new drainage outfall within the southwestern portion of the Specific Plan area created by others that has been sized to accommodate the proposed project and adjacent developments. Operation of these requirements, which would be unchanged with approval of the project, would ensure that no adverse impacts due to stormwater generation or contamination would take place, and impacts would be less than significant for questions e) and f).

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No New Impact. As noted above, a portion of the project site along the western boundary is within the 100-year flood plain. Section 15.40.51 of the Newark Municipal Code requires that building pads of all occupied structures to be a minimum of 11.25 feet above sea level with the finished floor being a minimum of six inches above the building pad. Also, Section 16.08.06 requires that top of curb grades for residential streets must be no less than 10 feet above sea level throughout the City. As discussed in Section 3.3, approximately 77,700 cubic yards of clean fill soil would be imported to elevate future structures above the 100-year flood hazard area. Therefore, impacts would be less than significant for questions g) and h).

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No New Impact. The project would expose new development to inundation in the event of the failure of James H. Turner and New Calaveras dams. Dam failure would most likely occur with adequate warning to evacuate residents. A failure would be preceded by increased seepage to the drain, initiation of seepages on the side slopes, and very high lake levels, however, permanent structures would likely be extensively damaged or destroyed. New Calaveras Dam was previously documented as having a higher-than-normal risk of failure. The San Francisco Public Utilities Commission began construction on the New Calaveras Dam Replacement Project in August 2011, and construction of the new dam was

completed in June 2019 (SFWPS 2019). With this improvement, the risk of failure is low. With the annual inspections of the James H. Turner dam and operation of the recently-constructed New Calaveras dam, the risk of dam failure is low and not considered a significant hazard to the project. Impacts would be less than significant, and no new impact would occur.

j) Inundation by seiche, tsunami, or mudflow?

No New Impact. Risks of inundation by tsunami, seiche, and mudflow were evaluated in the Specific Plan PEIR. The PEIR concluded that the risk of flooding due to a tsunami event is considered low due to the location of the Specific Plan area in the San Francisco Bay Area. Further, the portion of the Bay Area near the Specific Plan area is not subject to potential flooding by seiches since several levees and stretches of shallow water would minimize waves generated by a seiche. No areas of potential mud flow hazard, such as a volcano or hillside, are located near the project site or Specific Plan area. Therefore, impacts would be less than significant, and no new impact would occur.

X. LAND USE AND PLANNING

		New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:					
a)	Physically divide an established community?	☐	☐	☐	■
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	■
c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	■

Environmental Setting

Land use in the project area is regulated by the City of Newark through various plans and ordinances adopted by the City, including the City of Newark 2013 General Plan and the City of Newark Zoning Ordinance. Further, the FMC Willow and Grand Park project is included in the Bayside Newark TOD (formerly Dumbarton TOD) Specific Plan. A summary of the existing land use designations and zoning for the project site is provided below:

- **Existing Specific Plan Land Use Designations:** The current Specific Plan land use designations for the project site are Commercial/Retail, Commercial/Office, High Density Residential, Parks & Recreational Open Space, and Transit Station (RBF 2011).

- **Existing General Plan Land Use Designations:** The current General Plan land use designations for the project site are Community Commercial, High Density Residential, Public Institutional, and Parks and Recreational Facilities (City of Newark 2013).

- **Existing Zoning:** The current City of Newark zoning for the project site are Business and Technology Park (BTP) and Park (PK). The City of Newark Zoning Map from 2018 shows the entire project site is zoned as BTP (City of Newark 2018). However, as noted in Section 2.0, Project Background, the Newark City Council unanimously voted to rezone the previously-proposed Grand Park site from BTP to PK on January 24, 2019 which is not reflected on the City's Zoning Map. Therefore, a portion of the project site along the western boundary is also zoned as PK.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Land Use is discussed in Chapter 4.9 of the PEIR certified for the Specific Plan (RBF 2011). The PEIR concluded that, although the project would result in a change in the project area, the development would be required to comply with the Design Guidelines in the Specific Plan that would complement the surrounding land uses and would be an extension of existing residential and commercial development in the vicinity. Therefore, the project would not disrupt or divide an established community. Further, the Specific Plan would not result in a conflict with the City's General Plan land use strategy, the Bay Area Regional Smart Growth Strategy/Regional Livability Footprint Project, the San Francisco Bay Trail Plan, or the San Francisco Bay Plan. All lands use impacts were anticipated to be less-than-significant, and no mitigation measures were required.

As discussed under the Transfer of Dwelling Units header in Section 4.5, Adjustments/Transfers Regulations, the Specific Plan allows for the transfer of DU between APNs as long as the net increase does not exceed the total DU permitted by the Specific Plan (2,500 units). As of June 2022, a total of 2,171 DU have been approved or are pending approval in the Specific Plan area, including the proposed FMC Willow and Grand Park project (See Table 1 in Section 2.0). See below for the Transfer of Dwelling Units language in the Specific Plan:

> "The transfer of dwelling units between owners of legal Parcels is permitted as of right provided that there is no net increase to the total dwelling units, 2,500, permitted in this Specific Plan and provided that such transfer complies with the applicable zoning requirements for each land use designation involved, including density requirements (i.e. units may not be transferred to a Parcel to the extent that the applicable maximum density would be exceeded)."

Evaluation of Land Use and Planning

a) Physically divide an established community?

No New Impact. The lots surrounding the project site are actively being developed in accordance with the Specific Plan, of which the FMC Willow and Grand Park project is a part. Residential units planned within the Specific Plan area west, south, and southeast of the project site have been constructed and/or are under construction. The proposed project would contribute to a planned mixed use community development and would not physically divide an established community. Therefore, there would be no impact, and no new impact would occur.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No New Impact. Implementation of the proposed project would require Specific Plan, General Plan, and Zoning Map amendments. See below for a summary of the proposed amendments.

Specific Plan Amendment

The proposed project would change the total gross acreage of a land use planning area by more than 20 percent from the original gross acreage approved under the Specific Plan by reducing commercial/office,

commercial/retail, high density, and transit station land uses. Therefore, the project applicant is seeking a Specific Plan Amendment to change the Specific Plan land use designations in the project site from Commercial/Retail, Commercial/Office, High Density Residential, Transit Station, Parks & Recreational Open Space to Commercial Mixed Use, Medium/High Density Residential, Transit Station, Restricted Use Areas, and Parks & Recreational Open Space (see Figure 6, Specific Plan Land Use Changes, below). Table 16 below shows how the approval of the Specific Plan Amendment would impact the maximum number of dwelling units allowed to be developed on the project site.

TABLE 16.
SPECIFIC PLAN AMENDMENT IMPACT TO MAXIMUM ALLOWABLE DWELLING UNITS ON PROJECT SITE

Specific Plan Land Use Category	Specific Plan Land Use Category Acreage	Specific Plan Maximum Allowable Dwelling Units	Project Land Use Category Acreage	Project Maximum Allowable Dwelling Units
High Density Residential (25-60 DU/acre)	4.7 acres	282 DU	0	0
Medium/High Density Residential (16-60 DU/acre)	0	0	13.1 acres	786 DU
Delta from Approval of the Specific Plan Amendment				+504 DU

The Specific Plan designates 4.7 acres within the project site for High Density Residential (25-60 DU/acre) which would allow for a maximum of 282 DU to be developed within the project site as currently designated. The proposed project would amend the Specific Plan land use designations on the project site to allow for 1.2 acres of Commercial/Mixed Use and 13.1 acres of Medium/High Density Residential (16-60 DU/acre) to allow for the development of the proposed 370-unit mixed use community. Therefore, the proposed Specific Plan Amendment would allow up to 504 more residential dwelling units to be developed on the project site than currently allowed, and the approval of a Specific Plan Amendment would not result in a net loss of residential units planned to be developed on the project site per the Specific Plan as the project proposes the development of 370 dwelling units on the project site (88 more dwelling units than currently allowed without the Specific Plan Amendment). No net loss of residential capacity would occur as required by SB 330 (Gov. Code section 66300(i)(1).

The Specific Plan planned for the development of a total of 2,500 DU and 35,000 sf of retail. As of June 2022, a total of 2,171 DU and 3,600 sf of retail have been approved or are pending approval in the Specific Plan area, including the proposed FMC Willow and Grand Park project (see Table 1 in Section 2.0). Therefore, implementation of the proposed project would not cause an exceedance of the development thresholds planned for the Specific Plan and evaluated in the Specific Plan PEIR.

General Plan Amendment

The proposed project would require a General Plan amendment to change the General Plan land use designations of the project site from Community Commercial, High Density Residential, Parks and Recreational Facilities, and Public Institutional to Medium Density Residential, Commercial Mixed Use, Public Institutional, and Parks and Recreational Facilities (see Figure 7, General Plan Land Use Changes, below). Table 17 below shows how the approval of the General Plan Amendment would impact the maximum number of dwelling units allowed to be developed on the project site.

TABLE 17.
GENERAL PLAN AMENDMENT IMPACT TO MAXIMUM ALLOWABLE DWELLING UNITS ON PROJECT SITE

General Plan Land Use Category	General Plan Land Use Category Acreage	General Plan Maximum Allowable Dwelling Units	Project Land Use Category Acreage	Project Maximum Allowable Dwelling Units
High Density Residential (25-60 DU/acre)	5.9 acres	354 DU	0	0
Medium Density Residential (14-30 DU/acre)	0	0	13.4 acres	402 DU
Delta from the Approval of the General Plan Amendment				+48 DU

The General Plan designates 5.9 acres of land within the project site for High Density Residential (25-60 DU/acre) which would allow for a maximum of 354 DU to be developed within the project site as currently designated. The proposed project would amend the General Plan land use designations on the project site to allow for 1.2 acres of Commercial/Mixed Use and 13.4 acres of Medium Density Residential (14-30 DU/acre) to allow for the development of the proposed 370-unit mixed use community. Therefore, the proposed General Plan Amendment would allow for 48 more residential dwelling units to be developed on the project site than currently allowed, and the approval of the General Plan Amendment would not result in a net loss of residential units planned to be developed on the project site per the General Plan as the project proposes the development of 370 dwelling units on the project site (16 more dwelling units than currently allowed without the General Plan Amendment). No net loss of residential capacity would occur as required by SB 330 (Gov. Code section 66300(i)(1).

Zoning Map Amendment

The proposed project would require a zoning map amendment to change the zoning of the project site from Business and Technology Park and Park to Medium Density Residential - Form Based Code, Commercial/Mixed Use - Form Based Code, Transit Station, Public Facilities, and Park.

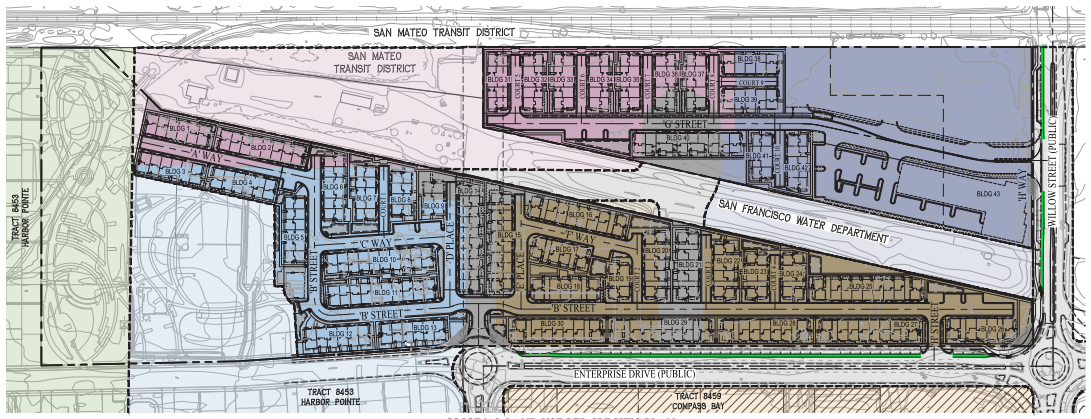
On January 24, 2019, the Newark City Council unanimously voted to rezone the 5-acre Grand Park site from Business and Technology Park (BTP) to Park (PK). The proposed project includes the reconfiguration of the previously approved Grand Park site to ensure that no residential dwellings are developed on the remediation site. With this reconfiguration, the Grand Park site would still be 5 acres, but the easternmost boundary line of the proposed park site would be shifted farther east as part of the proposed FMC Willow and Grand Park project while its northeastern corner would be adjusted to the southwest. Therefore, the areas of the reconfigured Grand Park site that are currently zoned for BTP would need to be rezoned by the City to allow for parks and recreational open space use (see Figure 8, Zoning Changes, below).

City approval of the proposed project would include approval of the General Plan, Specific Plan, and zoning amendment requests and resolve any land use designation or zoning inconsistencies. As noted above, approval of the General Plan and Specific Plan land use changes would not result in a net loss of residential dwelling units that could be developed on site. Additionally, none the plans discussed above were developed for the purpose of avoiding or mitigating an environmental effect. Therefore, the

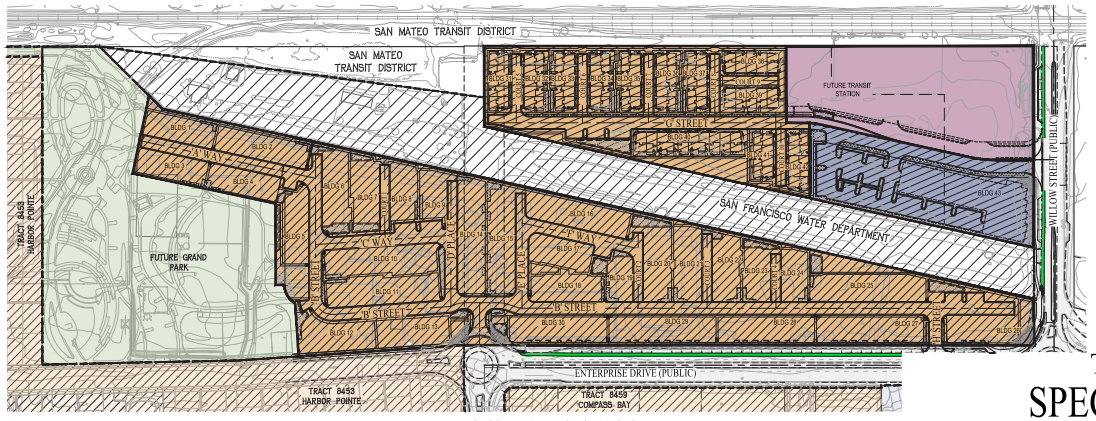
proposed project would not conflict with an existing land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, and impacts from the proposed project would be less than significant. No new impact would occur.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

No New Impact. As discussed in the biological resources section, no Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan has been approved for the City of Newark. Therefore, there would be no impact to an existing adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. No new impact would occur.



ORIGINAL LAND USE PER SPECIFIC PLAN



PROPOSED LAND USE CHANGES

ORIGINAL LAND USE VS PROPOSED LAND USE			
LAND USE CATEGORY	ORIGINAL LAND USE (PER SPECIFIC PLAN)	PROPOSED LAND USE	PROPOSED LAND USE CHANGE
COMMERCIAL/OFFICE	3.3 AC±	0.0 AC±	(3.3) AC±
TRANSIT STATION	2.7 AC±	2.1 AC±	(0.6) AC±
COMMERCIAL/RETAIL	4.7 AC±	0.0 AC	(4.7) AC±
COMMERCIAL/MIXED USE	0.0 AC	1.6 AC±	1.6 AC±
MEDIUM/HIGH DENSITY RESIDENTIAL	0.0 AC	13.1 AC±	13.1 AC±
HIGH DENSITY RESIDENTIAL	4.7 AC±	0.0 AC±	(4.7) AC±
PUBLIC STREETS	1.7 AC±	0.3 AC±	(1.4) AC±
TOTAL	17.1 AC±	17.1 AC±	0.0 AC

LEGEND

- COMMERCIAL/OFFICE
- TRANSIT STATION
- PARKS & RECREATION OPEN SPACE
- COMMERCIAL/RETAIL
- COMMERCIAL/MIXED USE
- HIGH DENSITY RESIDENTIAL
- MEDIUM/HIGH DENSITY RESIDENTIAL
- RESTRICTED USE AREA
- PUBLIC STREETS

TRACT 8559

SPECIFIC PLAN LAND USE CHANGES

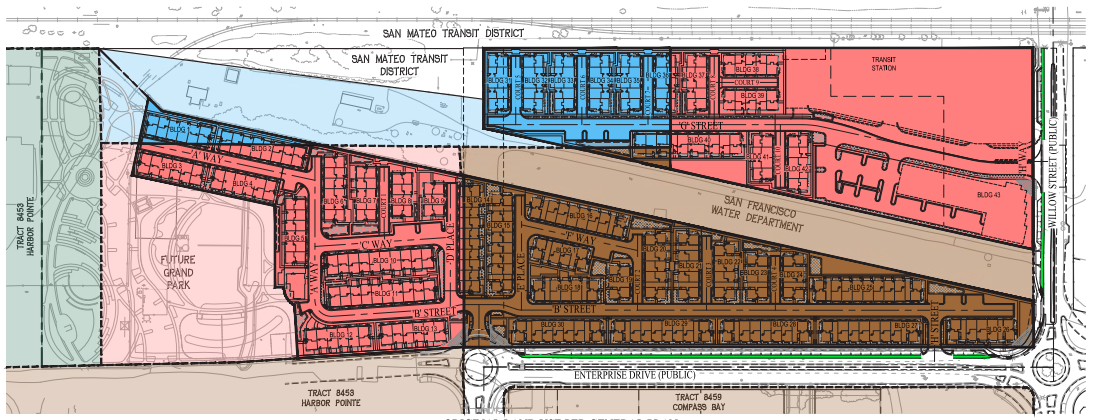
FMC WILLOW

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

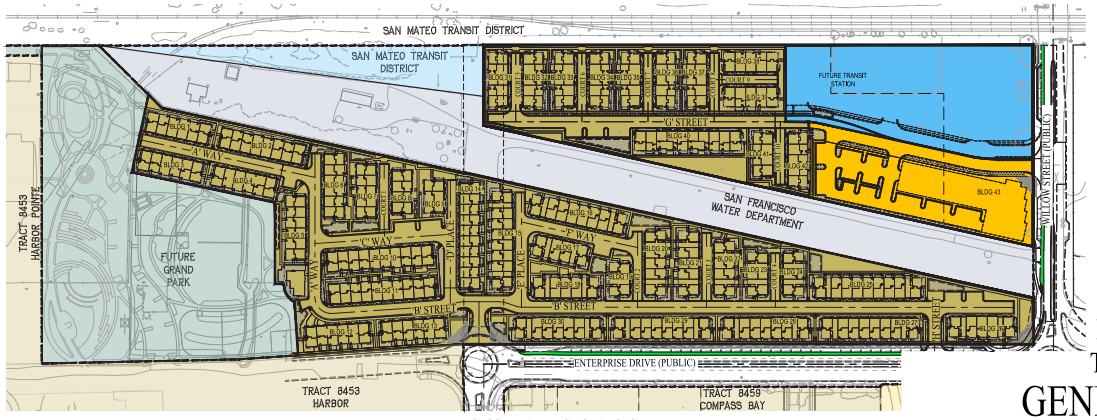
SCALE: 1"=100' DATE: OCTOBER 15, 2021

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ORIGINAL LAND USE PER GENERAL PLAN



PROPOSED LAND USE CHANGES

ORIGINAL GENERAL PLAN LAND USE VS PROPOSED LAND USE

LAND USE CATEGORY	ORIGINAL LAND USE (PER GENERAL PLAN)	PROPOSED LAND USE	PROPOSED LAND USE CHANGE
PUBLIC INSTITUTIONAL	1.9 AC±	0.0 AC±	(1.9) AC±
COMMERCIAL/MIXED USE	0.0 AC	1.6 AC±	1.6 AC±
COMMUNITY COMMERCIAL	9.3 AC±	0.0 AC±	(9.3) AC±
MEDIUM DENSITY RESIDENTIAL	0.0 AC	13.4 AC±*	13.4 AC±
HIGH DENSITY RESIDENTIAL	5.9 AC±	0.0 AC±	(5.9) AC±
TRANSIT STATION	0 AC	2.1 AC±	2.1 AC±
TOTAL	17.1 AC±	17.1 AC±	0.0 AC±

*RESIDENTIAL AVERAGE INCLUDES 0.3 ACRES PUBLIC ROW DEDICATION

LEGEND

- PUBLIC-INSTITUTIONAL
- PARKS & RECREATION FACILITY
- COMMUNITY COMMERCIAL
- COMMERCIAL/MIXED USE
- MEDIUM DENSITY RESIDENTIAL
- HIGH DENSITY RESIDENTIAL
- SFPUC/RESTRICTED USE AREA

EXHIBIT A
TRACT 8559

GENERAL PLAN LAND USE CHANGES

FMC WILLOW

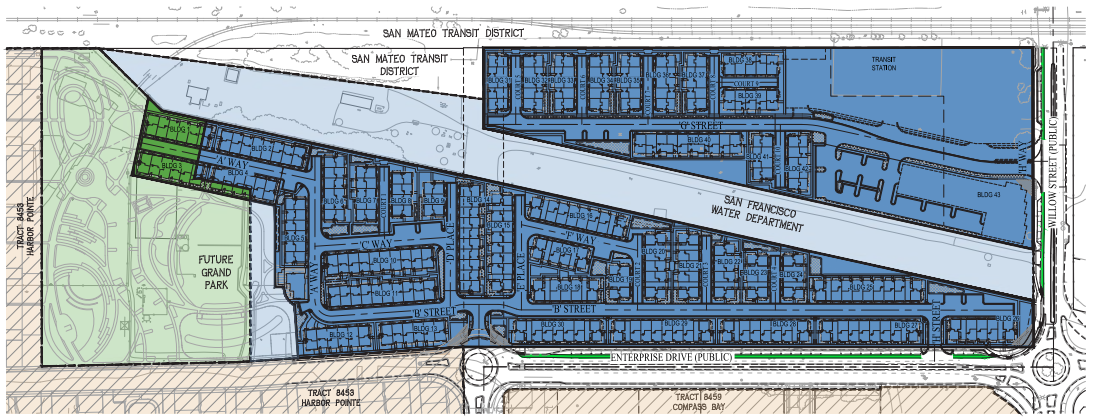
CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

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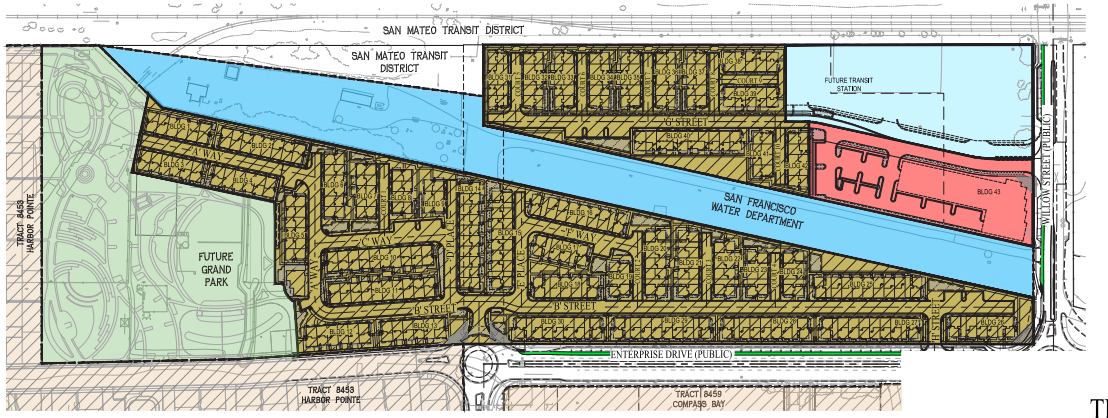
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CURRENT APPROVED ZONING



PROPOSED ZONING

ZONING AMENDMENT SUMMARY			
ZONING DISTRICT	CURRENT ZONING	PROPOSED ZONING	PROPOSED ZONING CHANGE
RESIDENTIAL MEDIUM DENSITY WITH FORM BASED CODE (RM)	0.0 AC	13.4 AC±*	13.4 AC±
COMMERCIAL MIXED USE (CMU)	0.0 AC	1.6 AC±	1.6 AC±
BUSINESS TECHNOLOGY PARK (BTP)	16.6 AC±	0.0 AC	(16.6) AC±
TRANSIT STATION (TS)	0.0 AC	2.1 AC±	2.1 AC±
PARK (PK)	0.5 AC±	0.0 AC	(0.5) AC±
TOTAL	17.1 AC±	17.1 AC±	0.0 AC

*RESIDENTIAL AVERAGE INCLUDES 0.3 ACRES PUBLIC ROW DEDICATION

LEGEND

- RESIDENTIAL MEDIUM DENSITY WITH FORM BASED CODE (RM)
- COMMERCIAL MIXED USE (CMU)
- PARKS (PF)
- BUSINESS AND TECHNOLOGY PARK (BTP)
- PUBLIC FACILITIES (PF)
- TRANSIT STATION (TS)

TRACT 8559

ZONING CHANGES

FMC WILLOW

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

SCALE: 1"=100' DATE: OCTOBER 15, 2021

0 100 200 300

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XI. MINERAL RESOURCES

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	■
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	■

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

As discussed in Chapter 1.2 of the PEIR prepared for the Specific Plan, mineral resources issues were not addressed in the PEIR because it was determined based on substantial evidence that the project would have no impacts to mineral resources (RBF 2011).

Evaluation of Mineral Resources

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No New Impact. The project site is not located in a zone of known mineral or aggregate resources. No active mining operations are present on or near the project site. Implementation of the proposed project would not interfere with the extraction of any known mineral resources. Therefore, there would be no impact for questions a) and b). No new impact would occur.

XII. NOISE

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	■
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	■
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	■
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (including construction)?	☐	☐	☐	■
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

Environmental Setting

The noise and vibration impacts associated with implementation of the Specific Plan were evaluated in Chapter 4.10 of the PEIR. Additionally, a project-specific noise and vibrations assessment was completed as part of the FMC Willow and Grand Park Project Noise Assessment Technical Report, included as Appendix F to this Initial Study (HELIX 2021b). The results of the noise and vibration assessment are summarized below.

Noise Terminology and Metrics

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ}, with a specified duration.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. Sound pressure amplitude is measured in micro-Pascals (mPa). One mPa is approximately one hundred billionth (0.00000000001) of normal atmospheric pressure. Sound pressure amplitudes for different kinds of noise environments can range from less than 100 to 100,000,000 mPa. Because of this wide range of values, sound is rarely expressed in terms of mPa. Instead, a logarithmic scale is used to

describe sound pressure level (SPL) in terms of dBA. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 mPa.

Because decibels are logarithmic units, SPL cannot be added or subtracted through standard arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than from one source under the same conditions. For example, if one automobile produces an SPL of 70 dB when it passes an observer, two cars passing simultaneously would not produce 140 dBA—rather, they would combine to produce 73 dBA. Under the decibel scale, three sources of equal loudness together produce a sound level 5 dBA louder than one source.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear is able to discern 1-dBA changes in sound levels, when exposed to steady, single-frequency ("pure-tone") signals in the mid-frequency (1,000 Hz–8,000 Hz) range. In typical noisy environments, changes in noise of 1 to 2 dBA are generally not perceptible. It is widely accepted, however, that people begin to detect sound level increases of 3 dBA in typical noisy environments. Further, a 5 dBA increase is generally perceived as a distinctly noticeable increase, and a 10 dBA increase is generally perceived as a doubling of loudness.

Maximum noise levels are expressed by the symbol L_{MAX}. Time-averaged noise levels are expressed by the symbol L_{EQ}, with a specified duration. The Day Night sound level (L_{DN}) is a 24-hour average with an added 10 dBA weighting during the hours from 10:00 p.m. to 7:00 a.m. The Community Noise Equivalent Level (CNEL) is a 24-hour average similar to L_{DN}, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and noise levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. These metrics are used to express noise levels for both measurement and municipal regulations, as well as for land use guidelines and enforcement of noise ordinances.

Groundborne Vibration Terminology and Metrics

Groundborne vibration consists of rapidly fluctuating motions or waves transmitted through the ground with an average motion of zero. Sources of groundborne vibrations include natural phenomena and anthropogenic causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., factory machinery) or transient (e.g., explosions). Several different methods are typically used to quantify vibration amplitude. One is the peak particle velocity (PPV) and another is vibration velocity decibels (VdB). The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave.

Noise and Vibration Sensitive Land Uses

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, such as residential dwellings, schools, transient lodging (hotels), hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. The closest NSLUs in the project vicinity are single-family homes approximately 190 feet southeast, across Willow Street. In addition, a residential development, under construction at the time of this analysis, is located approximately 100 feet south of the project site, across Enterprise Drive, and a future residential development would be located west of the project site, adjacent to the Grand Park.

The closest school to the project site is the August Schilling Elementary School, approximately 1,450 feet northeast.

Land uses in which groundborne vibration could potentially interfere with operations or equipment, such as research, manufacturing, hospitals, and university research operations (California Department of Transportation [Caltrans] 2013a) are considered "vibration-sensitive." The degree of sensitivity depends on the specific equipment that would be affected by the groundborne vibration. In addition, excessive levels of groundborne vibration of either a regular or an intermittent nature can result in annoyance to residential uses or schools. The closest land uses in the project area that are subject to annoyance from vibration would be the single-family residences to the south and southeast.

Regulatory Framework

City of Newark General Plan

The City General Plan Noise Element identifies noise and land use compatibility standards for various land uses. These standards are intended to provide compatible land uses throughout the community as related to environmental noise. Low density single-family residential land uses are considered "normally acceptable" in exterior noise environments of 60 dBA L_{DN} or less and multi-family residential land uses are considered "normally acceptable" in exterior noise environments of 65 dBA L_{DN} or less (City 2013). The Noise Element identifies interior noise standards of 45 dBA L_{DN} or less for all residential land uses.

The following goals and implementation policies from the Noise Element are relevant to the proposed Project:

> *Policy NO 1.2.1: The City shall require that all new developments incorporate design elements to minimize adverse noise impacts on surrounding land uses.*
>
> > *Program NO 1.2.1a: Establish design and planning requirements that lessen the impact of noise such as setbacks, earthen berms, building orientation, and landscaping.*
> >
> > *Program NO 1.2.1b: Require multi-family residences and hotels comply with the California Noise Insulation Standards, in the California Administrative Code, Title 25, Chapter 1, Subchapter 1, when they fall within the 60 dB (CNEL or L_{DN}) noise exposure contours.*
> >
> > *Program NO 1.2.1c: Establish planning requirements for designers and architects on placement of windows, doors, and bedrooms relative to noise sources.*
>
> *Policy NO 1.3.4: Control noise that causes discomfort between neighbors.*
>
> > *Program NO 1.3.4c: No person shall be allowed to cause any noise to be emitted past his/her property line in any manner so as to create any noise that would cause the ambient noise level to be increased by more than 6 dB.*

City of Newark Municipal Code

The City Municipal Code prohibits or limits the level of noise produced on private or public land and requires an analysis of future noise levels for projects which would site a noise sensitive land use. The following sections would be applicable to the project:

Section 17.24.100 – Noise

A. Noise Limits. It shall be unlawful for any person to disturb the peace, quiet, and comfort of the community, or any portion thereof, or neighborhood therein, by creating or causing to be created any unreasonable noises.

2. Noise Restriction by Decibel.

a. Residential Property Noise Limits.

i. No person shall produce or allow to be produced by human voice, machine, device, or any combination of same, on residential property, a noise level at any point outside of the property plane that exceeds 70 dBA between the hours of 7:00 a.m. and 9:00 p.m. or 60 dBA between the hours of 9:00 p.m. and 7:00 a.m.

ii. No person shall produce or allow to be produced by human voice, machine, device, or any combinations of same, on multifamily residential property, a noise level more than 60 dBA three feet from any wall, floor, or ceiling inside any dwelling unit on the same property, when the windows and doors of the dwelling unit are closed, except within the dwelling unit in which the noise source or sources may be located.

b. Commercial and Industrial Property Noise Limits. Except for commercial and industrial property abutting residential property, no person shall produce or allow to be produced by human voice, machine, device, or any other combination of same, on commercial or industrial property, a noise level at any point outside of the property plane that exceeds 70 dBA.

i. Abutting Residential Property. Commercial and industrial property that abuts residential property shall be subject to the residential property noise limits set forth in subsections (a)(i) and (ii) above.

c. Public Property Noise Limits. Except as otherwise provided in these regulations, no person shall produce or allow to be produced on public property, by human voice, machine, device, or any combination of same, a noise level that exceeds 60 dBA at a distance of 25 feet or more from the source. Noise from activities of the City of Newark is exempted from these regulations.

3. Construction and Landscaping Activities. Unless otherwise provided pursuant to a duly-issued permit or a condition of approval of a land use entitlement, the construction, alteration, or repair of structures and any landscaping activities, occurring between the hours of 10:00

a.m. and 6:00 p.m. on Sundays and holidays, and 7:00 a.m. and 7:00 p.m. on other days, shall be subject to the following:

a. No individual device or piece of equipment shall produce a noise level exceeding 83 dBA at a distance of twenty-five feet from the source. If the device or equipment is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close as possible to twenty-five feet from the equipment.

b. The noise level at any point outside of the property plane shall not exceed 86 dBA. During all other times, the decibel levels set forth in Subsection 17.24.100.A.2, Noise Restriction by Decibel, control.

B. Noise Creation and Noise Exposure.

1. Acoustic Study. An acoustic study shall be required for any proposed project which could create or be subject to a noise exposure greater than that deemed "normally acceptable" by the general plan.

2. Noise Attenuation Measures. Any project subject to the acoustic study requirements of Subsection 17.24.100.B.1, Acoustic Study, may be required as a condition of approval to incorporate noise attenuation measures deemed necessary to ensure that noise standards are not exceeded.

a. New noise-sensitive uses (e.g., schools, hospitals, churches, and residences) shall incorporate noise attenuation measures to achieve and maintain an interior noise level of 45 dBA.

b. Noise attenuation measures identified in an acoustic study shall be incorporated into the project to reduce noise impacts to satisfactory levels.

c. Emphasis shall be placed upon site planning and project design measures. The use of noise barriers shall be considered and may be required only after all feasible design-related noise measures have been incorporated into the project.

The following municipal code section would be applicable to vibration generated by the project, or affecting the project:

17.24.120 - Vibration.

No vibration shall be produced that is transmitted through the ground and is discernible without the aid of instruments by a reasonable person at the lot lines of the site. Vibrations from temporary construction, demolition, and vehicles that enter and leave the subject parcel (e.g., construction equipment, trains, trucks, etc.) are exempt from this standard.

A. Development Near Railroads. An acoustic study shall be required for any proposed development within two hundred feet of a railroad track. Measures may be required to ensure that vibration impacts remain below acceptable levels.

Existing Noise Conditions

The predominant existing noise sources in the vicinity of the project site are vehicular traffic on Willow Street and Enterprise Drive, and overflights of commercial aircraft. Although there are old train tracks within the right-of-way on the north side of the project, the Bayside Newark Rail Corridor is not currently active and has no train traffic.

Three short-term (10 to 15 minute) ambient noise measurements (M1, M2, and M3) were conducted during a site visit on December 4, 2018. Site M1 was located in the southwestern portion of the site, approximately 200 feet north of Enterprise Drive and 700 feet west of Willow Street. Site M2 was located in the northeaster portion of the site, approximately 500 feet north of Enterprise Drive and 450 feet west of Willow Street. Because of road construction on Willow Street adjacent to the project site, a representative traffic noise measurement was taken at site M3 on Willow Street between Seawind Way and Bayshore Avenue, approximately 1,100 feet (0.2 mile) southeast of the project site. All measurements were taken with the noise meter mounted on a tripod 5 feet above the ground.

Sources of noise noted during measurement M1 and M2 included construction activity on Willow Street and Enterprise Drive, and commercial aircraft overflying the site. Sources of noise noted during measurement M3 included traffic on Willow Street and commercial aircraft overflying the site. Traffic was counted on Willow Street during measurement M3 and included: 62 cars and light trucks; 3 medium trucks; and 5 heavy trucks. The measured noise levels were 56.7 dBA L_{EQ} at location M1, 52.4 dBA L_{EQ} at location M2, and 54.9 dBA L_{EQ} at measurement location M3.

Methods

Modeling of the exterior noise environment for the report was accomplished using a computer noise model: Computer Aided Noise Abatement (CadnaA) version 2021. CadnaA is a model-based computer program developed by *DataKustik* for predicting noise impacts in a wide variety of conditions. CadnaA assists in the calculation, presentation, assessment, and mitigation of noise exposure. It allows for the input of project-related information, such as noise source data, barriers, structures, and topography to create a detailed CadnaA model, and uses the most up-to-date calculation standards to predict outdoor noise impacts.

The traffic noise was modeled using the Traffic Noise Model (TNM) version 2.5. The TNM was released in February 2004 by the U.S. Department of Transportation (USDOT) and calculates the daytime average hourly LEQ from three-dimensional model inputs and traffic data (USDOT 2004). The one-hour L_{EQ} noise level is calculated utilizing peak-hour traffic. The one-hour L_{EQ} noise level is calculated utilizing peak-hour traffic calculations provided in the project-specific trip generation analysis (Fehr & Peers 2021). The one-hour L_{EQ} noise level output calculated by the model is equivalent to the L_{DN} (Caltrans 2013b).

Potential future rail noise in the project vicinity was analyzed using the Federal Transit Administration (FTA) Noise Impact Assessment Model, version 1/29/2019 (2019). The spreadsheet enables users to predict noise from combinations of locomotives, rail cars, and at-grade tracks crossing roads.

Levels of Significance

The significance of noise and vibration levels, or the increase in noise levels as a result of the project, are based on the following standards from the City General Plan or other agencies, consistent with the standards used to determine significance in the PEIR:

- **Temporary Construction Noise**: Construction activities which are not authorized by the City through a permit or condition of approval would be subject to the City Municipal Code Section 17.24.100.A.3 which limits the level of allowable construction noise.

- **Permanent Operational Noise**:

    - Traffic Noise sources: A substantial direct or cumulative permanent increase in traffic noise could occur if the resulting noise level exceeds the normally acceptable exterior level specified in the City General Plan for the land use affected (60 dBA L_{DN} for single-family residences and 65 dBA L_{DN} for multi-family residences), and the resulting noise level increase exceeds any of the following criteria:

        - An increase of the existing ambient noise levels by 5 dB or more, where the existing ambient level is less than 60 dBA L_{DN};

        - An increase of the existing ambient noise level by 3 dB or more, where the existing ambient level is 60 to 65 dBA L_{DN}; or

        - An increase of the existing ambient noise level by 1.5 dB or more, where the existing ambient level is greater than 65 dBA L_{DN}.

        - A significant portion of the noise increase would be the result of the project, and the "cumulative plus project" condition results in a 1 dBA increase in noise over the "cumulative no project" condition.

    - Non-Transportation Noise Sources: The City Municipal Code Section 17.24.100.2.a establishes noise limits for residential property, or commercial property which abuts residential property. Noise levels measured at any point outside of the property plane that exceed 70 dBA between the hours of 7:00 a.m. and 9:00 p.m. or 60 dBA between the hours of 9:00 p.m. and 7:00 a.m. would be significant.

- **Construction Groundborne Vibration**: The FTA has guidelines and recommendations to limit groundborne vibration based on the age and/or construction type of the structures near construction activity. Per the FTA, a groundborne vibration level of 0.2 inch-per-second peak particle velocity (PPV) would be considered the damage threshold criterion for non-engineered timber and masonry buildings (FTA 2018). This analysis assumes a conservative threshold of 0.2-inch-per-second.

- **Rail Groundborne Vibration**: Based on FTA vibration impact criteria, 80 vibration velocity decibels (VdB) is the applicable maximum acceptable vibration level for residential uses adjacent to a rail corridor with less than 30 vibration events per day passing by the project site (FTA 2018).

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Noise and vibration impacts are discussed in Chapter 4.10 of the PEIR prepared for the Specific Plan. The PEIR concluded that that implementation of the Specific Plan could have potentially significant adverse noise and vibration impacts and includes measures to reduce impacts to less than significant.

The PEIR concluded that temporary construction noise impacts to NSLUs in the Specific Plan vicinity and to future residents of the Specific Plan sited prior to full buildout of the Specific Plan would be potentially significant. Bayside Newark TOD Specific Plan PEIR Mitigation Measures 4.10-1a and 4.10-1b would limit the hours of construction activity and require project applicants to implement a site-specific constructions noise reduction program, and measures to track and respond to noise complaints. Implementation of Bayside Newark TOD Specific Plan Mitigation Measures 4.10-1a and 4.10-1b would reduce the impacts to less than significant.

The PEIR concluded that construction activities associated with implementation of the Specific Plan could require the use of impact pile drivers and the vibration impacts would be potentially significant. Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.10-2 would require alternatives to impact pile drivers be used where feasible, or a project specific vibration analysis if pile driving activities would occur with 25 feet of an occupied structure. Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.10-2 would reduce impacts to less than significant.

The PEIR concluded that noise from residential and commercial stationary sources would be consistent with the surrounding residential uses. Any new stationary noise source would be required to provide adequate sound attenuation such that City noise standards are achieved, and impacts would be less than significant.

The PEIR concluded that the impacts on project residences related to noise from future trains would be potentially significant. Bayside Newark TOD Specific Plan Mitigation Measure 4.10-3 requires a project-specific acoustical study and identification of noise reduction measures to reduce noise levels, if necessary, to reduce noise to a less than significant level.

The PEIR concluded that the Specific Plan area is not located within two miles of an airport or within an airport land use plan area and would not be exposed to excessive noise from aircraft, and the impact would less than significant.

The PEIR concluded that traffic noise increases on Willow Street between Thornton Avenue and Central Avenue would be potentially significant and cumulatively considerable. Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.10-4 would require a reduction in the speed limit on Willow Street to 25 mph and would reduce impacts to less than significant.

Evaluation of Noise

a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies? And

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? and

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (including construction)?

No New Impact.

Construction Noise

Construction activities would result in noise from the use of heavy construction equipment on the project site, from heavy trucks hauling debris from the site and hauling soil and building materials to the site, and from worker and vendor vehicles traveling to and from the site. The equipment to be used in construction of the project has not been determined, but could include backhoes, bulldozers, front loaders, scrapers, graders, compacting equipment, concrete saws, and jackhammers. The loudest equipment anticipated to be used would be a backhoe mounted jackhammer used to breakup old asphalt or concrete. Noise levels from a typical backhoe mounted jackhammer would measure 83 dBA L_{EQ} at 50 feet (FTA 2018). As discussed above, the nearest NSLU are residences approximately 100 feet south of the project site. A backhoe mounted jackhammer would be attenuated to approximately 77 dBA L_{EQ} at 100 feet.

The City Municipal Code Section 17.24.100.3 limits the allowable noise for any individual piece of construction equipment to 83 dBA measured at 25 feet, during the hours between 7:00 a.m. and 7:00 p.m. Monday through Saturday, and 10:00 a.m. to 6:00 p.m. on Sundays and holidays. The ordinance exempts construction noise from activities authorized by a duly issued permit or a condition of approval of a land use entitlement. The project would be required to obtain construction permits (e.g., grading, building), or a condition of approval, which specify that the project's daytime temporary construction noise would be exempt from the noise ordinance limits since the project was included as part of the approvals and MMRP requirements in the PEIR. Implementation of Bayside Newark TOD Specific Plan Mitigation Measure 4.10-1a would limit the construction activity to the hours between 9:00 a.m. to 7:00 p.m., Monday through Friday, and between 8:00 a.m. to 5:00 p.m. on Saturdays. In addition, Bayside Newark TOD Specific Plan Mitigation Measures 4.10-1a and 4.10-1b contain best management practices to reduce, track, and address construction noise. Therefore, the construction of the project would not result in a temporary increase in ambient noise levels. The impact would be less than significant with mitigation incorporated and would not exceed the severity of the impact conclusions in the PEIR. No new impact would occur.

Operational Residential Noise

The project residential uses would be consistent with the residential uses analyzed in the PEIR. Therefore, residential stationary noise sources, including HVAC systems (e.g., mechanical equipment) would not result in noise levels higher than that anticipated in the PEIR.

Further, the project design would ensure that residential HVAC sources would not exceed 45 dBA L_{DN} for interior habitable space prior to building occupancy. As a Condition of Approval, the City will require that a noise study be conducted prior to issuance of an occupancy permit to ensure that residential HVAC sources would not exceed 45 dBA $L_{DN.}$ Therefore, the impact would be less than significant and would not exceed the severity of the impact conclusions in the PEIR. No new impact would occur.

Operational Non-Residential Noise

The project's commercial/retail uses would be consistent with the non-residential uses analyzed in the PEIR. Therefore, commercial stationary noise sources, including heating, ventilation, and air conditioning (HVAC) systems (e.g., mechanical equipment) would not result in noise levels higher than that anticipated in the PEIR.

Noise from cars and buses (three buses per hour) approaching and circulating in the bus area (the four-lane entrance drive and within the Transit Station), and driving on Willow Street and Enterprise Drive was modeled as described in Section 3.2 of Appendix F. Peak hourly cars utilizing the entrance drive were estimated using the trip generation data from the transportation memorandum assuming 42 percent of project trips from the residential units (157 units in PA1 and PA2 out of the 370 total project units) and all of the commercial trips would utilize the entrance drive (59 peak hour trips; Fehr & Peers 2021).

Noise levels were predicted at receiver locations in the exterior spaces of the closest project residences to the Transit Station and Willow Street: ground level patios for the PA2 townhomes and second floor residences in the PA1 mixed-use building. The highest predicted noise level from the cars and buses using the entrance drive and vehicles on Willow Street would be 61.1 dBA L_{DN} and would not exceed the City's normally acceptable standard of 65 dBA L_{DN}. Therefore, the impact would be less than significant and would not exceed the impact severity of the conclusion in the PEIR. No new impact would occur.

Train Noise

The railroad tracks in the right-of-way along the project's northern boundary are not currently active, and there are no approved proposals to resume train traffic in the right-of-way. However, there is a potential for future passenger rail service which could result in noise impacts on future project residents. Potential future noise from passenger trains was modeled for two scenarios. Scenario 1 is six passenger trains per day, as assumed in the PEIR. Modeling assumes diesel locomotives pulling passenger cars similar to existing trains in use by Caltrain. Scenario 2 is the maximum anticipated rail traffic scenario in the DTCS, which would use diesel or electric multiple-unit trains (self-propelled trains, no locomotives). Assuming three-car diesel multiple-unit (DMU) trains similar to those in service for Sonoma-Marin Area Rail Transit, 25 daily trains would be required to carry the maximum anticipated daily ridership. The earliest anticipated train service in the DTCS would start in 2028.

The modeling conservatively assumes that all future train traffic would stop at the proposed platform adjacent to the Transit Station and continue east, crossing Willow Street at-grade. Trains approaching an at-grade crossing are required to sound their warning horns before reaching the crossing. In addition, the at-grade crossing would be equipped with an audible warning device when the roadway barriers are lowered. Due to the high density of existing and planned residential land uses along the DRC in the Newark area, if future regular passenger service on the DRC were to commence it is reasonable to

assume that the operator of the future rail service and/or the City would install upgraded traffic and vehicle barriers and seek designation of the area around the Willow Street crossing as a "quiet zone" by the Federal Railroad Administration (FRA). A quiet zone is an FRA exemption to the rule requiring trains to sound their horns when approaching public highway-rail grade crossings. Within a quiet zone, train crews can still sound train horns in emergency situations or for safety reasons, but routine sounding of horns on approach to a crossing is prohibited.

Potential noise from future trains and from the at-grade crossing warning devices at Willow Street, was modeled using the FTA Noise Impact Assessment Model. The highest predicted noise levels would be in the exterior spaces of the PA2 townhome closest to the railroad tracks in the northeastern portion of the project site. This residence would be approximately 50 feet from the railroad track centerline and 500 feet from the Willow Street at-grade crossing. For Scenario 1, six commuter trains per day, the highest predicted exterior noise level is 58 dBA L_{DN}. For Scenario 2, 25 DMU trains per day, the highest predicted exterior noise level is 56 dBA L_{DN}.

The predicted future train noise levels would not exceed the City standard of 65 dBA L_{DN} for multi-family residential exterior spaces. Because the residence location analyzed would be the closest to the railroad track and also the closest to the at-grade crossing at Willow Street, all other project residences, and their outdoor spaces, would experience less noise from trains than the analyzed location. In addition, an 8-foot masonry unit sound wall is planned between the PA2 Townhomes and the DRC which would further reduce noise in ground-level exterior spaces. Therefore, train noise levels predicted for exterior spaces of all project residences would be less than the City standard of 65 dBA L_{DN}.

The Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.10-3 requires an acoustical assessment and identification of noise reduction measures (e.g., building wall, door, and window Sound Transmission Class [STC] ratings) prior to issuing building permits. Because the assessment of train noise indicates that the City noise standards would not be exceeded, the requirements of Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.10-3 are met and the possible noise reduction measures listed in the mitigation measure would not be needed. The impact would be less than significant and would not exceed the impact severity of conclusions in the PEIR. No new impact would occur.

Traffic Noise

TNM software was used to calculate the noise levels at the nearest NSLUs for roadway segments in the project vicinity (including the portion of Willow Street that is adjacent to the proposed project site) for the following scenarios: Existing (year 2011 from the PEIR), Existing plus Project, Cumulative (year 2035), and Cumulative plus Project. The off-site roadway modeling represents a conservative analysis that does not account for topography or attenuation provided by existing structures. Table 18, *Off-Site Traffic Noise Levels*, presents the predicted noise levels and changes in L_{DN} as a result of the project.

TABLE 18.
OFF-SITE TRAFFIC NOISE LEVELS

Roadway Segment	Distance to Nearest NSLU (feet)[1]	NSLU Type	L_{DN} at Nearest NSLU					
			Existing (2011)			Cumulative (2035)		
			2011	2011 + Project	Change in L_{DN}	2035	2035 + Project	Change in L_{DN}
Thornton Ave.								
Gateway Blvd. to Willow St.	70	SF	63.3	63.4	0.3	66.9	67.0	0.1
Willow St. to Spruce St.	40	SF	65.3	65.7	0.4	69.3	69.6	0.3
Spruce St. to Cherry St.	40	SF	66.4	66.7	0.3	69.8	69.9	0.1
Cherry St. to Newark Blvd.	45	SF	66.9	67.1	0.1	68.5	68.6	0.1
Newark Blvd. to Cedar Blvd.	45	SF	67.6	67.7	0.1	69.2	69.3	0.1
Newark Blvd.								
Cedar St. to Thornton Ave.	50	SF	67.1	67.2	0.1	70.2	70.2	<0.1
Cedar St.								
Lake Blvd. to Thornton Ave.	50	SF	65.9	65.9	<0.1	68.4	68.4	<0.1
Thornton Ave. to Central Ave.	35	SF	67.1	67.1	<0.1	69.3	69.3	<0.1
Cherry Street								
Thornton Ave. to Central Ave.	50	SF	64.6	64.7	0.1	67.6	67.6	<0.1
Central Ave. to Mowry Ave.	45	SF	67.4	67.5	0.1	70.0	70.0	<0.1
Willow St.								
Thornton Ave. to Enterprise Dr.	60	SF	61.4	62.3	0.9	64.4	64.8	0.4
Central Ave.								
Cherry St. to Cedar St.	45	SF	65.1	65.1	<0.1	67.6	67.6	<0.1
Mowry Ave.								
Cherry Street to I-880	50	SF	68.4	68.5	0.1	70.4	70.4	<0.1
Enterprise Dr.[2]								
Willow St. to Hickory St.	50	MF	-	-	-	61.6	62.1	0.5

Source: TNM 2.5

Ave. = Avenue; Blvd. = Boulevard; Dr. = Drive; I-880 = Interstate 880; MF = Multi-Family Residential; NSLU = Noise Sensitive Land Use; SF = Single-Family Residential; St. = Street

Notes:

[1] Distance measured from roadway centerline.

[2] No NLSU and no traffic occur along Enterprise Drive for the segment between Willow Street and Hickory Street under existing conditions.

As shown in Table 18, the existing 60 dBA L_{DN} exterior noise standard for single-family residences would be exceeded for all roadway segments with or without the project. Under Existing + Project conditions, the highest predicted change in ambient noise for roadway segments that include existing adjacent NSLU would be 0.9 dBA L_{DN} on Willow Street. This change in permanent ambient noise level would not exceed the criterion of a 3.0 dBA or more increase where the existing ambient level is between 60 and 65 dBA L_{DN}. Therefore, the impact would be less than significant and would not exceed the severity of the impact conclusions in the PEIR. No new impact would occur for questions a), c), and d).

Cumulative Traffic Noise

As discussed above and shown in Table 18, the 60 dBA L_{DN} exterior noise standard for single-family residences would be exceeded for all roadway segments with or without the project. The highest

predicted change in cumulative noise level as a result of the project would be 0.5 dBA L_{DN} on Enterprise Drive. This change in permanent ambient noise level would not exceed the cumulative criterion of a 1 dBA or more incremental increase.

Some future residents of the project would be located along Willow Street, as close as 120 feet from the roadway centerline, and along Enterprise Drive, as close as 50 feet from the roadway centerline. As shown in Table 18, the traffic noise from traffic for the Cumulative (year 2035) plus project scenario (the scenario with the highest traffic levels), at street level, was estimated to be 64.8 dBA L_{DN} on Willow Street and 64.2 dBA L_{DN} on Enterprise Drive. Additional modeling was conducted to estimate noise levels at the second-floor exterior spaces of the affordable housing units in the northeastern portion of the project site along Willow Street and ground floor exterior spaces for the townhomes along Enterprise Drive. Units on higher floors would have lower exterior noise levels.

Maximum estimated exterior noise levels for third-floor exterior spaces of the affordable housing units along Willow Street and ground floor levels for the townhomes along Enterprise Drive are predicted to be 64.8 dBA L_{DN}. This modeled estimate would not exceed the City normally acceptable standard of 65 dBA L_{DN} for multi-family residential exterior spaces.

The Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.10-4 would require the applicant to work with the City to reduce the speed limit on Willow Street to 25 mph. However, the project site plan has been revised since the analysis in the PEIR has been conducted. Because the assessment of project and cumulative traffic noise indicates that the City noise standards would not be exceeded for project residences proposed along Willow Street, the requirements of Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.10-4 would not be needed. Therefore, the impact would be less than significant and would not exceed the severity of the impact conclusions in the PEIR. No new impact would occur for questions a), c), and d).

Mitigation Measures

Bayside Newark TOD Specific Plan Mitigation Measure 4.10-1a

To reduce noise impacts due to construction, project applicants shall require construction contractors to implement a site-specific noise reduction program, subject to City review and approval, which includes the following measures, ongoing through demolition, grading, and/or construction:

- Restrict noise-generating activities at the construction site or in areas adjacent to the construction site to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, and between 8:00 a.m. to 5:00 p.m. on Saturdays.

- Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds, wherever feasible).

- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electronically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools.

However, where use of pneumatic tools is unavoidable, an exhaust muffler shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.

- Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporated insulation barriers, or other measures to the extent feasible.

- If feasible, the noisiest phases of construction shall be limited to less than 10 days at a time.

Bayside Newark TOD Specific Plan Mitigation Measure 4.10-1b

Prior to the issuance of each grading permit, project applicants shall submit to the City Building Inspection Division a list of measures to respond to and track complaints pertaining to construction noise, ongoing throughout demolition, grading, and/or construction. These measures shall include the following:

- A procedure and phone numbers for notifying the City Building Inspection Division staff and Newark Police Department (during regular construction hours and off-hours);

- A sign posted onsite containing the permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours);

- The designation of an onsite construction complaint and enforcement manager for the project. The manager shall act as a liaison between the project and its neighbors (including onsite residents). The manager's responsibilities and authority shall include the following:

    - An active role in monitoring project compliance with respect to noise;

    - Ability to reschedule noisy construction activities to reduce effects on surrounding noise sensitive receivers;

    - Site supervision of all potential sources of noise (e.g., material delivery, shouting, debris box pick-up and delivery) for all trades; and,

    - Intervening or discussing mitigation options with contractors.

- Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of construction activities regarding the details and estimated duration of the activity; and,

- A preconstruction meeting shall be held with the job inspectors and the general contractor/onsite project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

No New Impact.

Construction Vibrations

The project's building foundation design and installation method has not been determined at the time of this analysis. Based on the size and height of the proposed project PA1 six-story building and four-story townhomes along Enterprise Drive and the soil typical of the project site, the building foundations may require support by deep piles. Impact driven piles could result in vibrations as high as 1.52 inches per second PPV at a distance of 25 feet (Caltrans 2013a). The closest vibration sensitive land use to potential pile driving activity would be approximately 180 feet across Enterprise drive to the south. A 1.52 inches per second PPV vibration level would equal approximately 0.17 inches per second PPV at a distance of 160 feet.[5] This would be lower than the 0.2-inches per second PPV FTA threshold for non-engineered wood and masonry structures. In addition, Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.10-2 requires alternatives to impact pile drivers to be used wherever possible, notification of all occupied residences within 300 feet of pile driving activities, and a site-specific vibration analysis if pile driving would be required within 25 feet of an occupied structure.

Another potential source of vibration during project construction activities would be a vibratory roller, which may be used within 100 feet of the nearest off-site residences to the south. A vibratory roller could create vibrations as high as 0.210 inches per second PPV at a distance of 25 feet (Caltrans 2013a). A 0.210 inches per second PPV vibration level would equal approximately 0.046 inches per second PPV at a distance of 100 feet. This would be lower than the 0.2 inches per second PPV FTA threshold for non-engineered wood and masonry structures.

Therefore, although vibrations from pile driving and vibratory rollers may be perceptible to nearby receptors, with implementation of Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.10-2, temporary groundborne vibration impacts associated with project construction would be less than significant and would not exceed the severity of the impact conclusions in the PEIR. No new impact would occur.

Train Vibrations

Potential groundborne vibration from trains was estimated following the general vibration assessment methodology in the FTA Transit Noise and Vibration Impact Assessment Manual (FTA 2018). For the closest project residential buildings to the potential future railroad tracks, 50 feet from the center of the right-of-way, the predicted groundborne vibration level for a train pass-by event would be 78.7 VdB for

[5] Equipment PPV = Reference PPV * $(25/D)^n$ (in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through typical soil); formula from Caltrans 2013a.

a diesel locomotive commuter train (Scenario 1, six trains per day) and 73.7 VdB for a DMU train (Scenario 2, 25 trains per day). This vibration would be below the FTA standard of 80 VdB for rail lines with less than 30 vibration events per day. Therefore, future residents of the project would not be subject to excessive groundborne vibrations from future passenger trains. No new impact would occur.

Bayside Newark TOD Specific Plan Mitigation Measure 4.10-2

If pile driving is required for building construction, construction contractors shall incorporate the following additional requirements:

- Wherever possible, sonic or vibratory pole drivers shall be used instead of impact pile drivers (sonic pile drivers are only effective in certain soils).
- Engine and pneumatic exhaust controls on pile drivers shall be required as necessary to ensure that exhaust noise from pile driver engines is minimized to the extent feasible.
- Where feasible, pile holes will be pre-drilled to reduce potential noise and vibration impacts.
- Occupied residences within 300 feet of pile driving activities shall be notified of pile-driving activities at least two weeks prior to the commencement of pile driving.
- Should pile driving activities take place within 25 feet of an occupied structure, a site-specific vibration impact analysis shall be conducted to ensure vibration levels do not exceed 0.2 inches per second PPV.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No New Impact. The closest airport or private airstrip to the project site is the Palo Alto Airport, approximately 4.5 miles southwest of the project. The project site is not within the airport influence area or the 55 dBA CNEL noise contour for the Palo Alto Airport (Santa Clara County 2016). Commercial aircraft fly over the project site at altitudes between 4,000 and 10,000 feet above sea level while approaching or departing the three major commercial airports in the Bay Area: the San Francisco International Airport (approximately 18 miles northwest); the Oakland International Airport (approximately 15 miles northwest); and the Norman Mineta San Jose International Airport (approximately 12 miles southeast). According to the noise exposure maps for the three airports, the project site in not within the 65 dBA CNEL contour for any of the airports (San Francisco 2015; Port of Oakland 2006; San Jose 2009). Therefore, the project would not expose people residing or working in the project area to excessive noise levels from airports. The impact would be less than significant and would not exceed the impact severity of the conclusions in the PEIR. No new impact would occur for questions e) and f).

XIII. POPULATION AND HOUSING

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	■
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

Environmental Setting

The proposed project would redevelop the 22.1-acre site into a 370-unit multi-family community including a mixed-use area of 3,600 sf of retail and 90 affordable units (plus 1 manager unit), a 1,485 square foot community building, a 5-acre park (Grand Park), along with approximately 1.8 acres set aside for a future transit station. The proposed residential land uses on site would be medium density residential (14-30 DU/acre). The Specific Plan planned for the development of a total of 2,500 DU and 35,000 sf of retail. As of June 2022, a total of 2,171 DU and 3,600 sf of retail have been approved or are pending approval in the Specific Plan area, including the proposed FMC Willow and Grand Park project (see Table 1 in Section 2.0).

The proposed project is anticipated to create jobs for at least 6 workers to staff the 3,600 sf of proposed retail and assumes that the retail workers would be based locally.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Population and Housing is discussed in Chapter 4.11 of the PEIR prepared for the Specific Plan (RBF 2011). The PEIR concluded that although the project would directly induce population growth in the City through new housing and businesses, the Specific Plan area is already planned for urban-level development and services and would be phased so that buildout is achieved gradually over time. Impacts to population and housing were anticipated to be less-than-significant, and therefore no mitigation measures were required.

Evaluation of Population and Housing

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

No New Impact. Implementation of the proposed project would result in the construction of 370 commercial/mixed-use and medium-density residential units with 3,600 sf of retail. The proposed project would increase the available housing, which would be expected to increase population in the area. However, the increase in housing and retail is consistent with the Specific Plan as the Specific Plan planned for a development of up to 2,500 DU and 35,000 sf of retail, and a total of 2,171 DU and 3,600 sf of retail have been approved or are pending approval in the Specific Plan area, including the DU and retail proposed as part of this project (See Table 1 in Section 2.0). Therefore, the proposed project would not induce unplanned substantial growth in the City of Newark, and impacts would be less than significant. No new impact would occur.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No New Impact. There are no existing residences on the project site. Therefore, neither housing units nor people would be displaced from implementation of the proposed project, and no replacement housing would be required. There would be no impact, and no new impact would occur for questions b) and c).

XIV. PUBLIC SERVICES

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	☐	☐	☐	■
b) Police protection?	☐	☐	☐	■
c) Schools?	☐	☐	☐	■
d) Parks?	☐	☐	☐	■
e) Other public facilities?	☐	☐	☐	■

Environmental Setting

The project site is in an area currently served by urban public services. Fire protection is provided by the Alameda County Fire Department. Police protection is provided by the City of Newark Police Department. Public education services for residents of the project site are provided by the Newark Unified School District (NUSD). Effective June 6, 2022, the school impact developer fee collected by NUSD is $4.79 per square foot for new residential habitable space and $0.78 per square foot for new commercial and industrial uses (NUSD 2022). Parks and recreational facilities are constructed and maintained by the City of Newark Public Works Department, and operational services are provided by City of Newark Recreation and Community Services Department.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Public Services are discussed in Chapter 4.12 of the PEIR prepared for the Specific Plan (RBF 2011). The PEIR concluded that the project would result in a population increase that would affect public services and identified several required actions to ensure individual projects within the Specific Plan would comply with development standards of public services and address additional costs. With implementation of the following actions, no mitigation measures would be required. Prior to issuance of building permits, the Alameda County Fire Department would be involved in the review of project plans and the project sponsor would be required to incorporate the department's requirements into the final project design as conditions of approval. The project applicant would be required to pay development impact fees for fire protection, police protection, and schools.

Effective June 6, 2022, the fee set by NUSD is $4.79 per square foot for new residential habitable space and $0.78 per square foot for new commercial and industrial uses (NUSD 2022).

Evaluation of Public Services

a) Fire protection?
b) Police protection?
c) Schools?
d) Parks?

No New Impact. The project site is within the City of Newark and is part of a larger planned development (Specific Plan) for which public services have been evaluated for service adequacy. As of June 2022, a total of 2,171 DU and 3,600 sf of retail have been approved or are pending approval in the Specific Plan area, including the proposed FMC Willow and Grand Park project (see Table 1 in Section 2.0). Therefore, the proposed project would not result in a significant increase in service demands or render the current service levels to be inadequate, as the total unit count and retail amount approved and pending in the Specific Plan area is below 2,500 DU and 35,000 sf of retail. Therefore, the service demands for the proposed project are within the service demands projected for the buildout of the Specific Plan.

Additionally, the project applicant is required to involve the Alameda County Fire Department in reviewing the project plans and incorporate the department's requirements into the final project design. Further, the project applicant is required to pay development impact fees for fire protection, police protection, and schools. By coordinating with the Alameda County Fire Department and paying the appropriate developer fees, impacts to public services would be less than significant for questions a) through d). No new impact would occur.

e) Other public facilities?

No New Impact. The Union Sanitary District (USD) would provide sanitary sewer service to the project site. Eight-inch diameter sanitary sewer lines would be installed in the main and ancillary roadways throughout the project site, and wastewater would gravity-flow off-site to the east. The proposed sewer lines in the southern portion of the project site would connect to an existing 10-inch sewer main in Enterprise Drive (which eventually connects to an existing 36-inch sewer main in Willow Street), and the northern portion of the proposed project would connect directly to the existing 36-inch gravity sewer main in Willow Street, which ultimately connects to additional existing gravity mains and flows to the Newark Pump Station near the northwest corner of the Specific Plan area. Wastewater from the Newark Station is then pumped to the Alvarado Treatment Plant, approximately 5 miles to the north. To ensure that the wastewater services to support the proposed project are adequate, Bayside Newark TOD Specific Plan Mitigation Measure 4.12-2 would be implemented.

> **Bayside Newark TOD Specific Plan Mitigation Measure 4.12-2 (Wastewater)**
>
> Prior to approval of a tentative map within the Specific Plan area, additional necessary improvements, if any, beyond those already included in the USD Master Plan and updated fee program, shall be determined regarding proposed new connections (from such tentative map development) and then-existing or proposed wastewater facilities. Such improvements shall be installed prior to issuance of a building permit and shall be consistent with requirements in the Sewer Master Plan (anticipated to be available in the summer of 2012). The City and USD shall

verify that any necessary improvements will be available prior to occupation of those new residential DU for which such improvements are necessary.

With implementation of Bayside Newark TOD Specific Plan Mitigation Measure 4.12-2, the impact of the project on wastewater services would be less than significant. No new impact would occur.

XV. RECREATION

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	■
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	■

Environmental Setting

Recreation is discussed in Chapter 4.13 of the PEIR prepared for the Specific Plan (RBF 2011). The project site is surrounded by several regional recreational resources located both within and outside of the City of Newark. The Don Edwards San Francisco Bay National Wildlife Refuge is a span of 30,000 acres that is located approximately 1,000 feet northwest of the project site, on the other side of the existing SamTrans railroad tracks. Coyote Hills Regional Park, which is managed by East Bay Regional Park District, is a 978-acre park located approximately 1.8 miles north of the project site. Ardenwood Historic Farm is located approximately 2 miles north of the project site. Several trails that connect to the San Francisco Bay Trail can be accessed near the project site, including the Newark Slough Trail, which is located approximately 0.75-mile northwest of the project site.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

As outlined in the Specific Plan PEIR, the Specific Plan area, which includes the FMC Willow and Grand Park project, designates approximately 16.3 acres of parkland for 2,500 residential units. This equates to a ratio of two acres of parkland per 1,000 residents, which falls short of the General Plan goal of 3.5 acres. The Specific Plan proposes a reduced parkland ratio because of the extensive amount of regional open space within the vicinity of the project area that will be available to future Specific Plan residents (Don Edwards National Wildlife Refuge, Coyote Hills Regional Park, and Ardenwood Regional Preserve), as well as the open space and recreational facilities available adjacent to schools, within private development, and facilities not maintained by the City of Newark. In addition, the Specific Plan proposes a wide variety parkland and recreational open space for future residents, including, a park on the Gallade property adjacent to the existing residential homes northeast of the intersection of Willow Street and Enterprise Drive and a connection to the Bay Trail at its currently "unimproved connection" on Willow Street. The Grand Park, included as part of the proposed project, would provide an additional recreational area along the northern boundary of the Specific Plan area.

The Specific Plan PEIR (RBF 2011) concluded that the 16.3 acres of parkland and San Francisco Bay Trail connection that is proposed by the Specific Plan, as well as the regional open space available within the project vicinity, would provide future Specific Plan residents with ample opportunities to enjoy

recreational facilities and open space, which would not increase the use or result in the deterioration of existing recreational resources. The PEIR also concluded that construction of parkland could potentially have adverse effects on the environment; however, implementation of construction-related mitigation measures would reduce those impacts to a less than significant level.

Evaluation of Recreation

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No New Impact. The Specific Plan planned for the development of 16.3 acres of park facilities to offset impacts from the buildout of the Specific Plan area, in which the FMC Willow and Grand Park project is included. The Specific Plan proposed a wide variety of parkland and recreational open space for future residents, including a community park (Grand Park), a park on the Gallade Property east of the project site on the opposite side of Willow Street, and a connection to the San Francisco Bay trail along the northern and western boundaries of the Specific Plan area.

The construction of the Grand Park envisioned in the Specific Plan is included as part of this proposed project and would provide 5 acres of recreational space for use by community residents. Additionally, the proposed project would also provide a 20-foot-wide trail corridor, containing a 12-foot-wide multi-purpose trail, that runs along the northwest boundary of the project site and curves to the south, transecting the Grand Park, to avoid pedestrian crossing of the Hetch Hetchy ROW. At the intersection with Enterprise Drive, the trail corridor reduces to a 12-foot-wide corridor and continues east along Enterprise Drive and curves north up Willow Street along the project site frontage. The quality and variety of the parkland space that would be provided by the proposed project, in accordance with the Specific Plan, would encourage future residents to use recreational facilities within the Specific Plan area. Additionally, the regional open space located near the project site, along with the proposed connection to the San Francisco Bay trail, would provide future residents with many opportunities to enjoy recreational resources and open space.

Therefore, there is abundant parkland space existing in the vicinity of the project site and proposed as part of the project, and the proposed project would not result in substantial deterioration of existing neighborhood or regional parks or require unplanned construction or expansion of recreational facilities. Therefore, impacts would be less than significant for questions a) and b). No new impact would occur.

XVI. TRANSPORTATION

		New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:					
a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	■
b)	Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	■
c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	■
d)	Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	■
e)	Result in inadequate emergency access?	☐	☐	☐	■
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	■

Environmental Setting

Transportation and Circulation were evaluated in Chapter 4.14 of the PEIR prepared for the Specific Plan (RBF 2011). Additionally, a project-specific trip generation and intersection operations analysis was conducted to determine the proposed project's contribution to the traffic evaluated in the Specific Plan and to evaluate the project site circulation and access (Appendix G, Fehr & Peers 2021).

This IS does not include a vehicle miles traveled (VMT) analysis as this IS/Addendum tiers from a PEIR that was certified in 2011. SB 743 (Steinberg 2013) required an update to the CEQA Guidelines regarding analysis of transportation impacts. CEQA Guidelines Section 15064.3 requires VMT to be used as the metric for analysis of transportation impacts for environmental documents prepared after July 1, 2020 and precludes use of the "level of service" (LOS) metric. The State Office of Planning and Research (OPR) has opined that an agency analyzing changes to a project for which an EIR has already been prepared using the LOS metric has the discretion to analyze the project under Pub. Res. Code Section 21066 and CEQA Guidelines Sections 15162 and 15164 without preparing new VMT analysis. (See OPR, SB 743 Frequently Asked Questions; https://opr.ca.gov/ceqa/sb-743/faq.html#tier-env-doc [accessed

December 16, 2021].) The agency thus may use its discretion to determine whether the changes to the project require revisions to the EIR or whether new information is available that would require revisions. This project reallocates land uses within the Specific Plan area and, as shown and analyzed in detail below, does not anticipate additional vehicle trips. Further, the project is located adjacent to a proposed transit center, which would *reduce* any VMT associated with the project (see CEQA Guidelines Section 15064.3(b)(1).) Therefore, there is substantial evidence to support the determination that further VMT analysis is not required for this project. (See also *CREED v. San Diego* (2011) 196 Cal.App.4th 515 (general global warming comments insufficient to qualify as new information requiring preparation of an EIR) and *Concerned Dublin Citizens v. City of Dublin* (2013) 214 Cal.App.4th 1301, 1320 (project could tier from a 2002 program EIR without an updated GHG analysis per new CEQA requirements).)

Access and Circulation

Planning Areas 1 and 2 would be accessible directly from one access point along Willow Street. A two-lane entrance road and system of interior roads and alleyways would provide vehicular access and circulation throughout the proposed development, north of the Hetch Hetchy ROW. A 45-foot radius eccentric cul-de-sac would be constructed at the terminus of the public portion of the proposed 'G' street which terminates east of PA2 and south of the Transit Station area. The cul-de-sac has been designed to accommodate the entry and exit of buses and emergency vehicles. West of the cul-de-sac, 'G' street would continue as a private driveway to access PA2.

Planning Areas 3 and 4, including the community building adjacent to the Grand Park, would be accessible directly from two access points along Enterprise Drive in the southern portion of the project site. The proposed project includes the extension of Hickory Street north of Enterprise Drive to access those planning areas in the southern portion of the project site. No roads, bridges, or paths would be constructed to cross the Hetch Hetchy ROW. One additional access point would be constructed along Enterprise Drive to allow direct access from Enterprise Drive to the proposed Grand Park. See Figures 3 and 4 for the site plan and design elements.

Parking Analysis

The City requires 2 off-street, covered parking spaces with 0.5 guest parking spaces per townhouse unit; 1.5 parking spaces per 1 bedroom unit and 2 parking spaces per 2-3 bedroom unit be provided for affordable units; and 3 parking spaces per 1,000 sf greater than 5,000 sf be provided for the retail space. The proposed project would construct 370 residential units (90 affordable units, 1 manager's unit, and 279 townhouse units) and 3,600 sf of retail, requiring 861 parking spaces. Due to the project's proximity to the Transit Station, the project applicant is seeking a 20 percent reduction in the required parking spaces. The project applicant is also seeking a density bonus incentive to reduce the number of required parking spaces for the affordable units to be 1 parking space per affordable unit. If approved by the City, the required parking spaces for the project would be reduced to 649 spaces.

In PA1, which includes the 90 affordable units plus 1 manager unit and 3,600 sf of retail, 163 parking spaces are required. The proposed project would provide 50 parking spaces within the proposed parking garage, 41 uncovered affordable unit parking spaces within the parking lot adjacent to the west of the mixed-use building, and 18 uncovered retail parking spaces for a total of 109 parking spaces.

Of the 630 parking spaces proposed to be provided for the 279 market-rate, townhouse units in PAs 2, 3, and 4, 558 parking spaces would be off-street garage parking spaces; 40 would be on-street in-tract parking spaces; and 32 would be on-street off-site parking spaces.

A total of 739 parking spaces are proposed to be provided which is 122 parking spaces less than required but 90 parking spaces more than required with City approval of the 20 percent parking reduction requested due to the project's proximity to the Transit Station and density bonus incentive for the affordable units. A Minor Use Permit would be required to allow for a parking reduction.

Fire Access

The minimum width available for driving or turning movements throughout the project site would be 21 feet in the courts throughout the development. The neighborhood streets would be at least 27 feet wide. The project roadway and neighborhood design meet City standards and would provide adequate turning radii and drive areas for fire engines and other emergency vehicles.

Trip Generation

The proposed project is estimated to generate 1,824 daily, 132 AM peak hour, and 161 PM peak hour external vehicle trips (Fehr & Peers 2021). The proposed project combined with all other approved and pending projects in the Specific Plan area would generate about 16,251 daily, 1,204 AM peak hour, and 1,527 PM peak hour external vehicle trips. This corresponds to about 115 percent of daily, 103 percent of the AM peak hour, and 116 percent of PM peak hour trips assumed in the PEIR. Note that the analysis presented in the transportation technical memorandum prepared by Fehr & Peers considers a slightly larger project than what is currently proposed and also considers the development of a five-story, mixed-use building with 8,300 sf of retail and 146 hotel rooms that is no longer proposed to be developed. Therefore, the proposed project would generate fewer vehicle trips than reported above. Refer to the memorandum containing the results of the trip generation evaluation in Appendix G.

Transportation Services

The proposed project would dedicate 1.8 acres of land that would be reserved for a Transit Station until an official City decision is made regarding the potential development of a Transit Station. When combined with other adjacent land parcels identified in the Specific Plan, this 1.8 acres would satisfy acreage requirements for the Transit Station identified in the Specific Plan. The proposed project would include the construction of a two-lane entrance road off Willow Street that would provide access to the Transit Station area and construction of interim improvements to the Transit Station parcel.

The City maintains a network of pedestrian and bike trails throughout the City, in addition to a network of on-street bike lanes. Sidewalks would be provided along the Enterprise Drive and Willow Street frontages. A system of sidewalks would be provided throughout the project development and each unit would have direct access to a short walking path that connects to the internal sidewalk system. The proposed project would include walkways and crosswalks that would lead to the Transit Station area via Enterprise Drive and Willow Street and connect to off-site sidewalks along the south side of Enterprise Drive and the east side of Willow Street.

The project would also provide a 20-foot-wide trail corridor, containing a 12-foot-wide multi-purpose trail, that runs along the northwest boundary of the project site and curves to the south, transecting the Grand Park, to avoid pedestrian crossing of the Hetch Hetchy ROW. At the intersection with Enterprise Drive, the trail corridor reduces to a 12-foot-wide corridor and continues east along the north side of Enterprise Drive and curves north up Willow Street along the project site frontage. The proposed recreational trail is anticipated to become part of the regional San Francisco Bay Trail.

No private or public airports are located within the City of Newark. The nearest airport to the proposed project site is the Palo Alto general aviation airport located 4.5 miles southwest of the site. The next nearest airport is the Norman Mineta San Jose International Airport which is approximately 12 miles southeast of the project site. No private airports are located within 10 miles of the City.

Emergency Access

The City of Newark identifies most major streets in the city as emergency evacuation routes. No aspect of the project would modify these streets or preclude their continued use as an emergency evacuation route. The project has incorporated turning radii sufficient for fire engine access in the project's roadway design.

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Transportation and Circulation were evaluated in Chapter 4.14 of the PEIR prepared for the Specific Plan (RBF 2011). The PEIR contains a measure for the City to coordinate with AC Transit to improve bus service to the Specific Plan area. The PEIR identifies impacts to traffic on regional roadways in the project vicinity and includes a measure for project applicants to pay all applicable transportation-related fees in accordance with the latest adopted fee schedule at the time the permits are sought (MMRP measure 4.14-8).

Evaluation of Transportation

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

No New Impact.

Project Trip Generation

The proposed project is estimated to generate 1,824 daily, 132 AM peak hour, and 161 PM peak hour external vehicle trips. The proposed project combined with all other approved and pending projects in

the Specific Plan area would generate about 16,251 daily, 1,204 AM peak hour, and 1,527 PM peak hour external vehicle trips. This corresponds to about 115 percent of daily, 103 percent of the AM peak hour, and 116 percent of PM peak hour trips assumed in the PEIR (Fehr & Peers 2021). Note that the analysis presented in the transportation technical memorandum prepared by Fehr & Peers considers a slightly larger project than what is currently proposed and also considers the development of a five-story, mixed-use building with 8,300 sf of retail and 146 hotel rooms that is no longer proposed to be developed. Therefore, would generate fewer vehicle trips than reported above. Refer to the memorandum containing the results of the trip generation evaluation in Appendix G.

Intersection Analysis

Because the daily trips for the proposed project combined with all other approved and pending projects would slightly exceed the daily trips assumed in the PEIR, an intersection analysis was completed to determine if the intersection impacts and mitigation measures from the PEIR were still applicable now that the Specific Plan area is reaching its buildout based on building permit applications.

The results of the trip generation evaluation indicate that the expected level of peak hour vehicle trip generation on a typical day with the Specific Plan buildout, as currently understood by the City, would exceed that studied in the PEIR. While the vehicle trip generation is greater, the intersection analysis results (both impacts and mitigation measures) identified in the PEIR would continue to be the same with the current Specific Plan buildout assumptions.

Implementation of Bayside Newark TOD Specific Plan Mitigation Measures 4.14-2 and 4.14-8 would reduce potential impacts to a less-than-significant level for questions a) and b):

Bayside Newark TOD Specific Plan Mitigation Measure 4.14-2 (AC Transit)

The City shall coordinate with AC Transit to improve bus service to the Specific Plan area to lessen the impact of vehicular traffic on the local and regional roadways. Potential transit accommodations may include:

- Implementation of shuttle service to the Ardenwood Park and Ride lot to provide a connection to the Bayside Newark Express bus line and the Fremont and/or Union City BART stations;
- Rerouting existing bus lines through the Specific Plan area to provide convenient stop(s) with bus shelters and benches;
- Addition of a new bus line to serve the Specific Plan area.

Bayside Newark TOD Specific Plan Mitigation Measure 4.14-8 (Regional Traffic)

Prior to issuance of building permits for a Specific Plan use, the applicant shall pay all applicable transportation-related fees in accordance with the latest adopted fee schedule at the time permits are sought. Such fees shall include, but not be limited to, the City of Newark Capital Facilities Fee for Transportation, and the ACTC Regional Transportation Impact Fee.

The Grand Park is expected to primarily serve residents of the project site and other surrounding residential developments. Visitors would likely access the park by foot or by bike from either their residence or nearby bus transit stop. Car traffic at the Grand Park site is expected to be low, and few parking spots are available on-site. Therefore, with implementation of Bayside Newark TOD Specific Plan Mitigation Measures 4.14-2 and 4.14-8, the proposed project would not conflict with any plan or policy related to transportation, and impacts would be less than significant. No new impact would occur for questions a) and b).

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No New Impact. No private or public airports are located within the City of Newark. The nearest public airfields are 4.5, 10, and 12 miles from the project site. No private airports are located within 10 miles of the project site. The project would not result in modification to any air travel route, and there would be no impact. No new impact would occur.

d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No New Impact. The proposed project would extend Hickory Street to the north of Enterprise Drive to provide access the southern portion of the project site. No roads, bridges, or paths would be constructed to cross the Hetch Hetchy ROW. The proposed project would also construct access roads, internal to the development, that would branch from Willow Street, Enterprise Drive, and the Hickory Street extension. Although the project would modify Willow Street and Enterprise Drive by introducing additional access points, the project is consistent with the existing access of developed areas in the vicinity and the proposed access of the Specific Plan area. The project would not require additional modifications to the roadways (e.g. re-alignment) other than those already identified in the PEIR prepared for the Specific Plan (RBF 2011) that will be conducted by others through the Specific Plan buildout. Because the modifications to the roadways would be minor and compatible with the access in the vicinity, and the overall Specific Plan area, the project would result in a less-than-significant impact, and no new impact would occur.

e) Result in inadequate emergency access?

No New Impact. The proposed project would not modify streets currently used for emergency access or preclude their continued use as an emergency evacuation route. The project design has incorporated fire access elements to ensure adequate emergency access to the site, and the plans would be approved by the Alameda County Fire Department prior to project implementation. Therefore, impacts would be less than significant. No new impact would occur.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

No New Impact. The project would not conflict with any adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. The project also would not result in the decreased performance or safety of such facilities. The project includes the construction of pedestrian facilities throughout the proposed development, including a proposed recreational trail that would be eligible to

be a part of the San Francisco Bay Trail. This would result in a less-than-significant impact, and no new impact would occur.

XVII. UTILITIES AND SERVICE SYSTEMS

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	■
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	■
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	■
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	■
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	■
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	■
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	■

Environmental Setting

The project site is served by the following service providers:

- **Water supply:** Alameda County Water District (ACWD) provides water to the cities of Fremont, Newark, and Union City, and would service the project site.
- **Wastewater treatment and disposal:** Union Sanitary District (USD) serves the cities of Fremont, Newark, and Union City, and would service the project site. Build out of the specific plan area could increase wastewater flows rates by 50 percent.
- **Storm water drainage facilities:** Storm drains within the public streets are maintained by the City of Newark, while storm drains within private yards, lanes, and passes would be privately maintained by the homeowners.
- **Solid waste service:** Republic Services, Inc. currently provides the City of Newark with solid waste refuse, recycling, and hazardous materials collection services. The landfill servicing the

site is the privately-owned Altamont Landfill. The Altamont Landfill has a permitted capacity of 124.4 million cubic yards. Approximately 48 percent of this capacity has been used and approximately 52 percent remains. The landfill is estimated to cease operation in 2070 (CalRecycle 2021).

Impacts and Mitigation Measures from the Bayside Newark Transit Oriented Development Specific Plan Certified PEIR

Utilities are discussed in Chapter 4.12 of the PEIR prepared for the Specific Plan (RBF 2011). The PEIR concludes that the project would result in a population increase that would affect utilities. The PEIR states that policies would be included in the General Plan to address wastewater services for the Specific Plan, and implementation of Bayside Newark TOD Specific Plan Mitigation Measure 4.12-2 would reduce impacts to the wastewater system to less than significant. The measure requires that individual projects within the Specific Plan shall determine proposed new connections outside of those included in the USD Master Plan, and those improvements will be installed prior to issuance of a building permit. The City and USD shall verify that any necessary improvements will be available prior to occupation of those new residential DU for which the improvements are needed.

The PEIR concludes that the landfill that would serve the proposed project has sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Evaluation of Utilities and Service Systems

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b) Require or result in the construction of new water, wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) Require or result in the construction of new storm water drainage facilities or expansion or existing facilities, the construction of which could cause significant environmental effects?

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No New Impact. Existing power lines, installed to serve previous industrial uses, extend throughout the Specific Plan area. As a result, the existing power grid consists of 21 kilovolt lines that have sufficient capacity to serve all likely development scenarios. For natural gas supply, it is likely that new development within the Specific Plan area, including the proposed project, would be served by an existing low-pressure two-inch line that runs along Willow Street from Central Avenue to just south of Enterprise Drive.

Communications within the Specific Plan area are currently served by overhead AT&T lines on Enterprise Drive and underground lines on Central Avenue. In addition, fiber-optic cable exists along part of Willow Street. AT&T anticipates that it will continue to expand its fiber-optic network on an as-needed basis. There are no existing Comcast facilities within or immediately adjacent to the Specific Plan area, including the project site. However, according to a company representative, Comcast is interested in

providing new development in this part of Newark with a full range of entertainment and communications services.

The ACWD would supply water to the proposed project, as described in the Specific Plan PEIR and associated Water Supply Assessment (WSA). The proposed project would include the installation of twelve-inch diameter water mains throughout the northern and southern portions of the development and cross the Hetch Hetchy ROW underground within the existing utility easement. The proposed 12-inch water main in the northern portion of the development would tie into the existing 12-inch water main in Willow Street and in Enterprise Drive from Court 4 in the southern portion of the development. However, the final determination of the proposed water line sizes would come from ACWD during their plan check review. The ACWD indicated in the adopted WSA for the Specific Plan PEIR that demand associated with the Specific Plan would be consistent with its planning assumptions and is included in its forecast and water supply planning (ACWD 2010). The Specific Plan planned for the development of a total of 2,500 DU and 35,000 sf of retail. As of June 2022, a total of 2,171 DU and 3,600 sf of retail have been approved or are pending approval in the Specific Plan area, including the proposed FMC Willow and Grand Park project (see Table 1 in Section 2.0). Therefore, there would be adequate water supply to support the proposed project.

The USD provides wastewater treatment for the City of Newark and would service the Specific Plan area, which includes the project site. Eight-inch diameter sanitary sewer lines would be installed in the main and ancillary roadways throughout the project site, and wastewater would gravity-flow off-site to the east. The proposed sewer lines in the southern portion of the project site would connect to an existing 10-inch sewer main in Enterprise Drive (which eventually connects to an existing 36-inch sewer main in Willow Street), and the northern portion of the proposed project would connect directly to the existing 36-inch gravity sewer main in Willow Street, which ultimately connects to additional existing gravity mains and flows to the Newark Pump Station near the northwest corner of the Specific Plan area. Wastewater from the Newark Station is then pumped to the Alvarado Treatment Plant, approximately 5 miles to the north.

The water treatment plant is currently rated to treat and discharge 30 million gallons per day (mgd). The USD has a NPDES General Permit with the SWRCB that allows treatment and discharge of 33 mgd. Buildout of the Specific Plan area, including the proposed project, could increase wastewater flow rates by 50 percent, which would put the treatment plant at 86.6 percent of capacity. Additional improvements to the Alvarado Treatment Plant, such as a new sewer main or equalization basin, may be required to support buildout of the Specific Plan area, which could potentially have effects on the environment. Therefore, Bayside Newark TOD Specific Plan Mitigation Measure 4.12-2 would be implemented to reduce potential wastewater impacts to a less-than-significant level.

Bayside Newark TOD Specific Plan Mitigation Measure 4.12-2 (Wastewater)

Prior to approval of a tentative map within the Specific Plan area, additional necessary improvements, if any, beyond those already included in the USD Master Plan and updated fee program, shall be determined regarding proposed new connections (from such tentative map development) and then-existing or proposed wastewater facilities. Such improvements shall be installed prior to issuance of a building permit and shall be consistent with requirements in the Sewer Master Plan (anticipated to be available in the summer of 2012). The City and USD shall verify that any necessary improvements will be available prior to occupation of those new residential DU for which such improvements are necessary.

An LID storm drain system comprised of bio-retention areas, curbs and gutters along the roadways, and underground storm drainpipes would be installed as part of the proposed project storm water management plan (CBG 2021). The proposed project would install storm drainpipes throughout the project site that would connect to existing City-owned storm drains located within Enterprise Drive and Willow Street. This storm drain system is designed to convey surface runoff to an outfall located within the southwestern corner of the Specific Plan area and, ultimately, to the San Francisco Bay. The project site would also be delineated into 50 DMAs with approximately 23,024-sf of bioretention treatment areas proposed within the project site. Bayside Newark TOD Specific Plan Mitigation Measure 4.8-4a would be implemented to further reduce potential stormwater runoff impacts.

Bayside Newark TOD Specific Plan Mitigation Measure 4.8-4a (Hydrology)

Plans submitted for grading permits shall include a detailed hydrology report. The report shall include calculations regarding the anticipated volume of stormwater runoff generated by the proposed development, and shall demonstrate that adequate stormwater conveyance and capacity is available in the existing facilities selected depending on the location of the proposed development (i.e., the Line F-1 channel, the City's existing outfall into the Line F-1 channel, the existing human-created tidal channel that is tributary to Newark Slough, and existing City facilities in Willow Street). The hydrology report shall be subject to review and approval by the City Engineer.

If the hydrology report determines that the existing facilities do not have adequate stormwater conveyance and capacity to serve the proposed development, then the project applicant shall develop a detailed stormwater detention plan for the retention/detention of stormwater runoff on the project site. The stormwater detention facilities shall be designed with adequate capacity to ensure that that stormwater generated on the project site during a peak storm event is retained at a rate that would ensure that discharges from the site do not exceed pre-construction levels. All detention facilities shall be developed in conformance with the City's standards and the standards of the Alameda County Flood Control and Water Conservation District. The plans and specifications of the proposed detention facilities shall meet the standards of the City Engineering Department as an adequate engineering product. The construction of stormwater detention facilities may be phased to correspond with development of the project site over time, provided that adequate detention is provided at all times to ensure that runoff from the site does not exceed pre-construction levels.

Additionally, because the utility plan for the proposed project includes underground crossing of the Hetch Hetchy ROW within the existing utility easement for a 12-inch water line and 24-inch storm drain line, the following mitigation measure from the Specific Plan EIR would be implemented:

Bayside Newark TOD Specific Plan Mitigation Measure 4.8-4b (Hetch Hetchy Crossing)

Plans submitted for grading permits for future projects requiring storm drainage lines and water mains that cross the Hetch Hetchy Pipeline shall include measures to ensure that there is sufficient room for these infrastructure improvements to pass over Hetch Hetchy Pipeline (i.e., placement of additional fill).

With implementation of Bayside Newark TOD Specific Plan Mitigation Measures 4.12-2, 4.8-4a, and 4.8-4b above, impacts from the construction of new wastewater and storm drainage utilities systems would be reduce to a less-than-significant level for questions a), b), c), and e). No new impact would occur.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

No New Impact. The Specific Plan area, which includes the project site, is serviced by the ACWD. In compliance with SB 610, a WSA was prepared for the Specific Plan, which relies heavily on the Urban Water Management Plan (UWMP). According to the WSA, the Specific Plan is included in the ACWD's water demand forecast and is consistent with planning assumptions. The Specific Plan planned for the development of a total of 2,500 DU and 35,000 sf of retail. As of June 2022, a total of 2,171 DU and 3,600 sf of retail have been approved or are pending approval in the Specific Plan area, including the proposed FMC Willow and Grand Park project (see Table 1 in Section 2.0). Therefore, there would be adequate water supply to support the proposed project, and no new or expanded entitlements are needed.

Under normal precipitation conditions, the water supply is projected to meet the Specific Plan area's demand. However, in the future, water supply to the Specific Plan area, including the proposed project may be cut back because of shortages during dry years. These cutbacks would depend on the severity of the dry-year shortage and would be consistent with the rest of the ACWD's service areas. According to the WSA, during critically dry years the ACWD would secure additional water supply through the Department of Water Resources, and, if necessary, would implement a drought contingency plan to cut back on water use. This would ensure the project would have sufficient water supply during drought years.

Compliance with the requirements provided in the WSA will ensure that there will be sufficient water supply to serve the Specific Plan area. Therefore, impacts would be less than significant, and no new impact would occur.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

g) Comply with federal, state, and local management and reduction statues and regulations related to solid waste?

No New Impact. Republic Services, Inc. currently provides the City of Newark with solid waste refuse, recycling, and hazardous materials collection services. After being processed at a facility in San Leandro, waste from the City is hauled to the privately-owned Altamont Landfill located in Livermore. The Altamont Landfill will serve the Specific Plan area, which includes the FMC Willow and Grand Park project. The Altamont Landfill has a permitted capacity of 124.4 million cubic yards. Approximately 48 percent of this capacity has been used and approximately 52 percent remains. The landfill is estimated to cease operation in 2070 (CalRecycle 2021).

In compliance with requirements stipulated under the Integrated Waste Management Act (AB 939), the City of Newark, Republic Services, Inc., and the Alameda County Source Reduction and Recycling Board have implemented measures to reduce the amount of waste hauled to the Altamont Landfill. These

agencies are promoting the recycling of many different materials, which will help reduce the amount of solid waste entering the Altamont Landfill and would extend the lifetime of the landfill.

Because the landfill serving the project area is of sufficient capacity to accommodate solid waste needs, impacts would be less than significant for questions f) and g), and no new impact would occur.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

	New Significant Impact	Less Than Significant with Project-level Mitigation Incorporated	Less Than Significant Impact	No New Impact
The lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur. Where prior to commencement of the environmental analysis a project proponent agrees to MMs or project modifications that would avoid any significant effect on the environment or would mitigate the significant environmental effect, a lead agency need not prepare an EIR solely because without mitigation the environmental effects would have been significant (per Section 15065 of the State CEQA Guidelines):				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	■
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	☐	☐	☐	■
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	■

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

No New Impact. The preceding analysis indicates that the proposed FMC Willow and Grand Park project would not have a significant adverse impact on overall environmental quality, including the potential to reduce the habitat of fish and wildlife species, or contribute to lowering populations below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of

California history or prehistory. With implementation of the measures set forth in this Initial Study (and as previously analyzed in the PEIR), potential impacts on overall environmental quality as a result of the proposed project would be less than significant. No new impact would occur.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?

No New Impact. While the project would indirectly contribute to cumulative impacts associated with increased urban development in the City and region, these impacts have previously been evaluated in the PEIR prepared for the Specific Plan and are incorporated into the City of Newark's 2013 Updated General Plan. The PEIR concluded that development of the project site as allowed under the Specific Plan may contribute to significant cumulative impacts as a result of contribution to the loss of vegetation and wildlife resources, impacts to cultural resources, seismic or soils hazards, greenhouse gas emissions, hazardous materials, hydrology and water quality, and noise levels. With implementation of the measures set forth in this Initial Study (and as previously analyzed in the PEIR), cumulative impacts as a result of the proposed project would be less than significant. No new impact would occur.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

No New Impact. As outlined in other sections of this Initial Study, the proposed project would adhere to mitigation measures previously prescribed in the Specific Plan PEIR for potentially significant impacts to air quality, biological resources, cultural resources, seismic or soils hazards, greenhouse gases, hazardous materials, hydrology, drainage and water quality, noise, wastewater treatment, regional traffic congestion, and the stormwater system. These impacts have been reduced to a less-than-significant level at both the project and cumulative level through project design and mitigation measures. No new impact would occur.

9.0 REFERENCES

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Appendix A

Mitigation Monitoring and Reporting Program for the FMC Willow and Grand Park Project

Mitigation Measure	Implementation Procedure	Monitoring Responsibility	Monitoring/Reporting Action & Schedule	Non-Compliance Sanction/Activity	Monitoring Compliance Record Name/Date
Air Quality					
4.2-1a - Prior to issuance of any Grading Permit, the Public Works Director and the Building Official shall confirm that Grading Plans, Building Plans, and specifications stipulate that, in compliance with the BAAQMD CEQA Air Quality Guidelines, the following basic construction mitigation measures shall be implemented for all construction projects: • All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.	Require as a condition of project approval. Project applicant includes measures on plans submitted for grading permits. Construction contractor implements control measures.	City Council and Planning Division Engineering/Building Division Building Division	Draft and incorporate condition as part of project approval. Review plans prior to issuance of grading permits to ensure that requirements described in Mitigation Measure 4.2-1a have been met. Conduct periodic site visits during demolition, grading and construction.	Deny project approval. Deny grading permits. Halt demolition, grading or construction until control measures are implemented.	

• Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points. • All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. • A publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints shall be posted. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.					
4.2-1b - Prior to issuance of any Grading Permit, the Public Works Director and the Building Official shall confirm that the Grading Plans, Building Plans, and specifications stipulate that, in compliance with the BAAQMD CEQA Air Quality Guidelines, the following additional construction mitigation measures shall be implemented for all construction projects:	Require as a condition of project approval. Project applicant includes measures on plans submitted for grading permits.	City Council and Planning Division Engineering/Building Division	Draft and incorporate condition as part of project approval. Review plans prior to issuance of grading permits to ensure that requirements described in Mitigation	Deny project approval. Deny grading permits.	

• All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe. • All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph. • Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity. • Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. • The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time. • All trucks and equipment, including their tires, shall be washed off prior to leaving the site. • Site accesses up to a distance of 100 feet from the paved road shall be treated	Construction contractor implements control measures.	Building Division	Measure 4.2-1b have been met. Conduct periodic site visits during demolition, grading and construction.	Halt demolition, grading or construction until control measures are implemented.	

with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel. • Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent. • Minimizing the idling time of diesel powered construction equipment to two minutes. • The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NOX reduction and 45 percent PM reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available. • Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings). • Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control					

Technology for emission reductions of NOX and PM. • Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy duty diesel engines.					
Biological Resources					
4.3-2 - In order to avoid impacts on nesting raptors, a nesting survey shall be conducted on individual project site parcels prior to commencing with earth-moving or construction work if this work would occur during raptor nesting season (between February 1 and August 31). The raptor nesting survey shall include examination of all trees on or within 300 feet of the entire project site, not just trees slated for removal, since ground vibrations and noise from earth-moving equipment can disturb nesting birds and potentially result in nest abandonment. Since northern harriers are ground nesting raptors, the nesting survey shall also include systematic walking transects across all suitable ground on the project site parcels. If nesting raptors are identified during the surveys, orange construction fence shall be installed to establish a 300-foot radius around the nest unless a qualified biologist determines that a lesser distance will adequately protect the nest (refer to discussion below for more detail). If the tree or nest is located off the project site, then the buffer shall be demarcated per the	Require as a condition of project approval. Project applicant hires qualified biologist to conduct nesting survey if grading or construction would occur during nesting season. Project applicant provides necessary buffer if nests are identified.	City Council and Planning Division Planning Division Planning/Building Divisions	Draft and incorporate condition as part of project approval. Prior to commencement of construction, ensure that survey has been conducted and requirements described in Mitigation Measure 4.3-2 have been met. Conduct periodic site visits during grading and construction.	Deny project approval. Delay commencement of construction. Halt construction until necessary buffer is provided.	

above where the buffer intersects the project site. The size of the non-disturbance buffer may be altered if a qualified raptor biologist conducts behavioral observations and determines the nesting raptors are well acclimated to disturbance. If this occurs, the raptor biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to nesting raptors. If the buffer is reduced, the qualified raptor biologist shall remain onsite to monitor the raptors' behavior during heavy construction in order to ensure that the reduced buffer does not result in take of eggs or nestlings. No construction or earth-moving activity shall occur within the established buffer until it is determined by a qualified raptor biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by August 1. This date may be earlier or later and would have to be determined by a qualified raptor biologist. If a qualified biologist is not hired to monitor the nesting raptors then the full 300-foot buffers shall be maintained in place from February 1 through the month of August. The buffer may be removed and work may proceed as otherwise planned within the buffer on September 1.					

4.3-3 - Western burrowing owl surveys shall be conducted by a qualified western burrowing owl biologist 90 days prior to construction of any project within the project site and again 30 days prior to construction of a project as described below to ensure there are no impacts on burrowing owls. Burrowing owl surveys conducted according to the methodologies prescribed by CDFG in their 1995 Staff Report on Burrowing Owl Mitigation are more likely to be accepted by CDFG. The survey methodologies that will otherwise meet the standards of care required by CEQA are provided below. These methods may not be as intense as those methods described in the document cited above but these methods have been coordinated with CDFG biologists for other projects and are sufficient for detecting burrowing owls provided an experienced burrowing owl biologist conducts the surveys. Using the methodology prescribed below, burrowing owl and burrow surveys shall be conducted 90 and 30 days in advance of project site disturbance. Two surveys shall be conducted 90 days before ground disturbance associated with the project and two surveys shall be conducted in the 30 day period prior to ground disturbance associated with the project. The CDFG Staff Report states that preconstruction surveys need to be completed within 30 days of grading prior to CDFG accepting a survey conclusion that no burrowing owls occur in a proposed study area (i.e., negative findings).	Require as a condition of project approval. Project applicant hires qualified biologist to conduct surveys. Project applicant provides necessary buffer and meets other requirements, as described in Mitigation Measure 4.3-3.	City Council and Planning Division Planning Division and CDFG Planning/Building Divisions	Draft and incorporate condition as part of project approval. Prior to commencement of grading or construction, ensure that survey has been conducted and requirements described in Mitigation Measure 4.3-3 have been met. Conduct periodic site visits during grading and construction.	Deny project approval. Delay commencement of grading or construction. Halt grading and/or construction until buffer is provided and other requirements are met.	

Western burrowing owl surveys shall be conducted from two hours before sunset to one hour after, or one hour before to two hours after sunrise. All burrowing owl sightings, occupied burrows, and burrows with owl sign (e.g., pellets, excrement, and molt feathers) shall be counted and mapped. Surveys shall be conducted by walking all suitable habitat on the entire project site and (where possible) in areas within 150 meters (approximately 500 feet) of the project impact zone. The 150-meter buffer zone is surveyed to identify burrows and owls outside of the project area which may be impacted by factors such as noise and vibration (heavy equipment) during project construction. Pedestrian survey transects shall be systematically spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines shall be no more than 30 meters (approx. 100 feet) and shall be reduced to account for differences in terrain, vegetation density, and ground surface visibility. To effectively survey large projects (100 acres or larger), two or more surveyors shall be used to walk adjacent, parallel transects. To avoid impacts on owls from surveyors, owls and/or occupied burrows shall be avoided by a minimum of 50 meters (approx. 160 feet) if in the non-breeding months (October 1 through February 1) and 250 feet during the breeding months (February 1 through October 1). Disturbance to occupied burrows and within the established buffers					

shall be avoided until no burrowing owls occur on the site. If burrowing owls are detected on the site during the breeding season (peak of the breeding season is April 15 through July 15), and appear to be engaged in nesting behavior, a fenced 250-foot buffer shall be required between the nest site(s) (i.e., the active burrow(s)) and any earth-moving activity or other disturbance in the project area. This 250-foot buffer could be decreased to 160 feet once it is determined by a qualified burrowing owl biologist that the young have fledged (that is, left the nest). Typically, the young fledge by August 31. This date may be earlier than August 31, or later, and would have to be determined by a qualified burrowing owl biologist. If burrowing owls were found on the project site, a qualified biologist shall delineate the extent of burrowing owl habitat on the site. To mitigate impacts on burrowing owls, CDFG prescribes that six and a half acres (6.5 acres) of replacement habitat be set aside (i.e., protected in perpetuity) per pair of burrowing owls, or unpaired resident bird. Such a set-aside would offset permanent impacts on burrowing owl habitat. To illustrate the extent of mitigation land required by CDFG, this example is provided: If two pairs of burrowing owls are identified on the study area, 13 acres of mitigation land would be acquired. Or, if one pair and one resident bird are identified, 13 acres of mitigation land would be acquired. The					

protected lands shall be adjacent to occupied burrowing owl habitat if possible, and at a location selected in consultation with CDFG. Land identified to offset impacts on burrowing owls shall be protected in perpetuity by a suitable property instrument (e.g., a conservation easement or fee title acquisition). A Mitigation Plan shall be prepared in consultation with CDFG for review and approval by the City. The Mitigation Plan shall identify the mitigation site and any activities proposed to enhance the site, including the construction of artificial burrows and maintenance of California ground squirrel populations on the mitigation site. In addition, for each pair of burrowing owls found in the construction area, two artificial nesting burrows shall be created at the mitigation site. The Plan shall also include a description of monitoring and management methods proposed at the mitigation site. Monitoring and management of any lands identified for mitigation purposes shall be the responsibility of the applicant for at least five years. An annual report shall be prepared for submittal to CDFG and the City by December 31 of each monitoring year. Contingency measures for any anticipated problems should be identified in the plan.					
4.3-4 - In order to avoid impacts on nesting passerines, a nesting survey shall be conducted on individual project site parcels and within 100 feet of the parcel being developed prior to commencing initial earth-moving or construction work on that parcel	Require as a condition of project approval. Project applicant hires qualified	City Council and Planning Division Planning Division	Draft and incorporate condition as part of project approval. Prior to commencement of	Deny project approval.	

if this work would occur during the passerine nesting season, that is, between March 1 and September 1. The nesting survey shall also survey lands within 100 feet of the parcel being developed. The nesting surveys shall be completed approximately 15 days prior to commencing work. If special-status birds are identified nesting on or near the project site, a 100-foot radius around all identified active nests shall be demarcated with orange construction fencing to establish a non-disturbance buffer. If an active nest is found offsite, the intersecting portion of the buffer that is onsite shall be fenced. No construction or earth-moving activity shall occur within this 100-foot staked buffer until it is determined by a qualified biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. If common (that is, not special-status) birds, for example, red-winged blackbird, are identified nesting on or adjacent to the project site, a non-disturbance buffer of 75 feet shall be established or as otherwise prescribed by a qualified ornithologist. The buffer shall be demarcated with orange construction fencing. Disturbance around an active nest shall be postponed until it is determined by the qualified wildlife biologist that the young have fledged and have attained sufficient flight skills to leave the area.	biologist to conduct nesting survey if grading or construction would occur during nesting season. Project applicant provides necessary buffer if nests are identified.	Planning/Building Divisions	construction, ensure that survey has been conducted and requirements described in Mitigation Measure 4.3-2 have been met. Conduct periodic site visits during grading and construction.	Delay commencement of construction. Halt construction until necessary buffer is provided.	

Typically, most birds in the region of the project site are expected to complete nesting by August 1. However, in the region many species can complete nesting by the end of June or in early to mid-July. Regardless, nesting buffers shall be maintained until August 1 unless a qualified wildlife biologist determines that young have fledged and are independent of their nests at an earlier date. If buffers are removed prior to August 1st, the biologist conducting the nesting surveys shall prepare a report that provides details about the nesting outcome and the removal of buffers. This report shall be submitted to the City project planner prior to the time that buffers are removed if the date is before August 1.					
4.3-8 - A tree permit shall be obtained from the City prior to the removal of any tree protected by City ordinance on project site parcels. To offset impacts resulting from the removal of these trees, replacement trees shall be planted in designated open space areas on the subject parcel. Tree replacement shall be at a 1:1 ratio (that is, for each tree removed, one tree shall be planted as a replacement). Replacement trees shall be native California species that are native to the Newark area. Replacement trees planted adjacent to the Don Edwards San Francisco Bay National Wildlife Refuge should first be coordinated with the Refuge to avoid the introduction of perching sites for predatory species.	Require as a condition of project approval. Project applicant obtains tree permit, provides tree replacement and prepares a Tree Management Plan, as described in Mitigation Measure 4.3-8.	City Council and Planning Division Planning Division	Draft and incorporate condition as part of project approval. Review tree permit to ensure that requirements of Mitigation Measure 4.3-8 have been met.	Deny project approval. Deny issuance of tree permit.	

A Tree Management Plan shall be prepared for any project on any project site parcel where tree removal occurs. Preparation of this plan and subsequent planting and monitoring shall be a condition of project approval and shall be tied to a security bond or cash deposit posted by the developer with the City to pay for any remedial work that might need to occur, if the prior effort fails. All planted trees shall be provided with a buried, irrigation system that shall be maintained over a minimum three-year establishment period. The irrigation system shall be placed on automatic electric or battery operated timers so that trees are automatically watered during the dry months of the establishment period. At the end of the three-year establishment period, the irrigation system could be removed, if necessary. The planted trees' health shall be monitored annually for five years by a qualified biologist or arborist. Annual monitoring reports shall be submitted to the City. At the end of a five-year monitoring period, at least 80 percent of planted trees shall be in good health. If the numbers of planted trees falls below an 80 percent survival rate, additional trees shall be planted to bring the total number of planted trees up to 100 percent of the original number of trees planted. Irrigation and follow-up monitoring shall be established over an additional three year period after any replanting occurs. Any					

replanting and follow-up monitoring shall be reported in annual reports prepared for the City, Community Development Department. A performance bond, letter of credit, or other financial instrument shall be established to pay for any remedial work that might need to occur, if the prior effort fails.					
Cultural Resources					
4.4-1a - Prior to the issuance of grading permits for future development allowed within the Dumbarton TOD Specific Plan area, project sponsors shall retain qualified archaeologists meeting the Secretary of the Interior's Professional Qualification Standards to train the construction crew on the mechanisms used to identify cultural resources and to caution them on the legal and/or regulatory implications of knowingly destroying cultural resources or removing artifacts or human remains from the project sites. If subsurface deposits believed to be cultural or human in origin are discovered during the construction of future development projects within the Dumbarton TOD Specific Plan area, then all work shall halt within a 200-foot radius of the discovery and they shall be evaluated by a professional archaeologist. If a potentially-eligible resource is encountered, then the archaeologist, lead agency, and project sponsor shall arrange for either: 1) total avoidance of the resource, if possible; or 2) test excavations to evaluate eligibility and, if eligible, data recovery as mitigation.	Require as a condition of project approval. Project applicant hires qualified archaeologist to train construction crew. If subsurface deposits are discovered during construction, contractor halts work and complies with requirements, as described in Mitigation Measure 4.4-1a.	City Council and Planning Division Planning Division Planning/Building Divisions	Draft and incorporate condition as part of project approval. Prior to issuance of grading permits, confirm that archaeologist has been hired and training has been completed. Conduct periodic site visits during grading and construction.	Deny project approval. Deny issuance of grading permits. Halt construction until requirements are met.	

If human remains of any kind are found during construction activities, all activities shall cease immediately and the Alameda County Coroner shall be notified as required by State law (Section 7050.5 of the Health and Safety Code). If the coroner determines the remains to be of Native American origin, he or she shall notify the Native American Heritage Commission (NAHC). The NAHC shall then identify the most likely descendant(s) (MLD) to be consulted regarding treatment and/or reburial of the remains.					
Geology and Soils					
4.5-1 - The ACWD regulates the construction, repair, and destruction of wells, exploratory holes, and other excavations located within the City of Newark under ACWD Ordinance No. 2010.01. Future developers within the Specific Plan area shall have a design-level geotechnical engineering investigation performed for their individual property or properties prior to its (their) development. The mitigation measures specified by the design-level geotechnical engineering investigations shall become conditions to the issuance of grading permits for such individual property. The design-level geotechnical engineering investigations shall only address each specific individual property proposing construction, unless future developers mutually agree to include more than one property in a single investigation.	Require as a condition of project approval. Project applicant submits design-level geotechnical investigation.	City Council and Planning Division Engineering Division	Draft and incorporate condition as part of project approval. Prior to issuance of grading permits, review geotechnical investigation and confirm that recommendations are included in construction plans.	Deny project approval. Deny issuance of grading permits.	

The design-level geotechnical engineering investigations shall take into consideration the specific locations and types of development, as well as specific soil and rock conditions identified by subsurface investigation and laboratory testing. The likely mitigation measure recommendations of the design-level geotechnical engineering investigations regarding the design and construction of project-related development are regularly employed, have known and proven efficacy, and could include without limitation, one or more of the following: • Removing the soft/loose soil by excavating the soil and backfilling the excavation with compacted soil, thus densifying the soft/loose soil; • Supporting structures on deep foundations, such as piles or piers; • Improving the soft/loose soils by various methods, such as dynamic deep compaction, constructing surcharge fills, installing wick drains, grouting, and other methods; • Strengthening structures to withstand seismic shaking and differential ground settlement; and/or, • Other methods as determined by the geotechnical engineer in the					

geotechnical report to be prepared for the sites.					
4.5-2 - Prior to any soil improvement measures and/or dewatering activities, the project geotechnical engineer(s) shall coordinate with the ACWD to ensure compliance with ACWD Ordinance No. 2010-01.	Require as a condition of project approval. Project geotechnical engineer coordinates with ACWD.	City Council and Planning Division Engineering Division and ACWD	Draft and incorporate condition as part of project approval. Prior to issuance of grading permits, review plans and confirm that requirements of ACWD Ordinance No. 2010-01 are met.	Deny project approval. Deny issuance of grading permits.	

Hazards and Hazardous Materials					
4.7-1a - Prior to the issuance of grading or building permit for an individual property within the Specific Plan area with known, suspected, or potential residual environmental contamination, the property owner shall, to the extent such activities have not previously been performed by the property owner pursuant to the requirements of the San Francisco Bay Regional Water Quality Control Board (RWQCB) or other overseeing agency under applicable environmental laws (Oversight Agency), do all of the following: 1) summarize available information regarding the magnitude and extent of soil and groundwater contamination at the subject property; 2) perform a data gap analysis; 3) based on the results of the data gap analysis, determine whether any additional investigation is needed to fill data gaps and, if so, propose and perform such investigation with the approval of the Oversight Agency; 4) provide either a Health Risk Assessment (HRA) or Feasibility Study (FS) containing an HRA to summarize potential risks to human health and the environmental posed by the contamination with respect to the proposed development; 5) based on the HRA or as set forth in the FS, develop remedial options to address the identified risks based upon the proposed development, which remedial option may include engineering or institutional controls, and tentatively select the most appropriate remedial option to ensure that the proposed development will not present an	Require as a condition of project approval. Project applicant coordinates with Oversight Agency to determine that proposed land use does not present unacceptable risk.	City Council and Planning Division Planning Division	Draft and incorporate condition as part of project approval. Prior to issuance of building permits, confirm that determination has been made.	Deny project approval. Deny issuance of building permits.	

unacceptable risk to human health or the environment as required by applicable environmental laws, as well as procedures for proper management of contaminated soil and groundwater that may be encountered during development; and 6) submit a report to the Oversight Agency for review and regulatory approval of the proposed remedial plan, including engineering and/or institutional controls, under applicable environmental laws.					
4.7-1b - Prior to grading permit issuance, areas to be graded shall be cleared of debris, significant vegetation, pre-existing abandoned utilities, buried structures, and asphalt concrete.	Require as a condition of project approval. Project applicant clears areas to be graded.	City Council and Planning Division Building/Engineering Divisions	Draft and incorporate condition as part of project approval. Prior to issuance of grading permits, confirm that areas to be graded have been cleared.	Deny project approval. Deny issuance of grading permits.	
4.7-1c - Prior to the import of a soil to a particular property within the Specific Plan area as part of that property's site development, such soils shall be sampled for toxic or hazardous materials exceeding applicable Environmental Screening Levels for the proposed land use at such a property as required by the Oversight Agency prior to importing to such a property.	Require as a condition of project approval. Project applicant has import soil sampled for toxic or hazardous materials.	City Council and Planning Division Building/Engineering Divisions	Draft and incorporate condition as part of project approval. Prior to import of soil, confirm that soil has been sampled.	Deny project approval. Delay import of soil.	

Hydrology and Water Quality					
4.8-4a - Plans submitted for grading permits shall include a detailed hydrology reports. The reports shall include calculations regarding the anticipated volume of stormwater runoff generated by the proposed development, and shall demonstrate that adequate stormwater conveyance and capacity is available in the existing facilities selected depending on the location of the proposed development (i.e., the Line F-1 channel, the City's existing outfall into the Line F-1 channel, the existing human-created tidal channel that is tributary to Newark Slough, and existing City facilities in Willow Street). The hydrology reports shall be subject to review and approval by the City Engineer. If the hydrology reports determine that the existing facilities do not have adequate stormwater conveyance and capacity to serve the proposed development, then the project applicant shall develop a detailed stormwater detention plan for the retention/detention of stormwater runoff on the project site. The stormwater detention facilities shall be designed with adequate capacity to ensure that that stormwater generated on the project site during a peak storm event is retained at a rate that would ensure that discharges from the site do not exceed pre-construction levels. All detention facilities shall be developed in conformance with the City's standards and the standards of the Alameda County Flood Control and Water	Require as a condition of project approval. Project applicant submits detailed hydrology reports and submits a detailed retention/ detention plan if adequate conveyance and capacity is unavailable.	City Council and Planning Division Building/Engineering Divisions	Draft and incorporate condition as part of project approval. Review hydrology reports prior to issuance of grading permits to ensure that requirements of Mitigation Measure 4.8-4a have been met.	Deny project approval. Deny issuance of grading permits.	

Conservation District. The plans and specifications of the proposed detention facilities shall meet the standards of the City Engineering Department as an adequate engineering product. The construction of stormwater detention facilities may be phased to correspond with development of the project site over time, provided that adequate detention is provided at all times to ensure that runoff from the site does not exceed pre-construction levels.					
Noise					
4.10-1a - To reduce noise impacts due to construction, project applicants shall require construction contractors to implement a site-specific noise reduction program, subject to City review and approval, which includes that following measures, ongoing through demolition, grading and/or construction: • Restrict noise-generating activities at the construction site or in areas adjacent to the construction site to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, and between 8:00 a.m. to 5:00 p.m. on Saturdays. • Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically-attenuating shields or shrouds, wherever feasible).	Require as a condition of project approval. Project applicant submits noise reduction program.	City Council and Planning Department Planning/Building Divisions	Draft and incorporate condition as part of project approval. Review noise reduction program prior to issuance of demolition, grading and/or building permits.	Deny project approval. Deny issuance of demolition, grading and/or building permits.	

• Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electronically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible. • Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporated insulation barriers, or other measures to the extent feasible. • If feasible, the noisiest phases of construction shall be limited to less than 10 days at a time.					
4.10-1b - Prior to the issuance of each grading permit, project applicants shall submit to the City Building Inspection Division a list of measures to respond to and track complaints pertaining to construction noise, ongoing throughout demolition, grading, and/or construction. These measures shall include the following:	Require as a condition of project approval. Project applicant submits list of measures.	City Council and Planning Department Building Division	Draft and incorporate condition as part of project approval. Review list prior to issuance of grading permits to ensure that requirements of Mitigation Measure	Deny project approval. Deny issuance of grading permit.	

• A procedure and phone numbers for notifying the City Building Inspection Division staff and Newark Police Department (during regular construction hours and off-hours). • A sign posted onsite pertaining the permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours). • The designation of an onsite construction complaint and enforcement manager for the project. The manager shall act as a liaison between the project and its neighbors (including onsite residents). The manager's responsibilities and authority shall include the following: - An active role in monitoring project compliance with respect to noise; - Ability to reschedule noisy construction activities to reduce effects on surrounding noise sensitive receivers; - Site supervision of all potential sources of noise (e.g., material delivery, shouting, debris box pick-up and delivery) for all trades; and,			4.10-1b have been met.		

- Intervening or discussing mitigation options with contractors. • Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of construction activities regarding the details and estimated duration of the activity; and, • A preconstruction meeting shall be held with the job inspectors and the general contractor/onsite project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.					
4.10-2 - If pile driving is required for building construction, construction contractors shall incorporate the following additional requirements: • Wherever possible, sonic or vibratory pole drivers shall be used instead of impact pile drivers (sonic pile drivers are only effective in certain soils). • Engine and pneumatic exhaust controls on pile drivers shall be required as necessary to ensure that exhaust noise from pile driver engines are minimized to the extent feasible. • Where feasible, pile holes will be pre-drilled to reduced potential noise and vibration impacts.	Require as a condition of project approval. Construction contractors incorporate additional noise reduction requirements, as described in Mitigation Measure 4.10-2.	City Council and Planning Department Building Division	Draft and incorporate condition as part of project approval. Review plans prior to issuance of grading permits to ensure that additional requirements are incorporated.	Deny project approval. Deny issuance of grading permits.	

• Occupied residences within 300 feet of pile driving activities shall be notified of pile-driving activities at least two weeks prior to the commencement of pile driving. • Should pile driving activities take place within 25 feet of an occupied structure, a site-specific vibration impact analysis shall be conducted to ensure vibration levels do not exceed 0.2 inches per second PPV.					
Public Services					
4.12-2 - Prior to approval of a tentative map within the Dumbarton TOD Specific Plan area, additional necessary improvements, if any, beyond those already included in the USD Master Plan and updated fee program, shall be determined regarding proposed new connections (from such tentative map development) and then-existing or proposed wastewater facilities. Such improvements shall be installed prior to issuance of a building permit and shall be consistent with requirements in the Sewer Master Plan (anticipated to be available in the summer of 2012). The City and USD shall verify that any necessary improvements will be available prior to occupation of those new residential dwelling units for which such improvements are necessary.	Require as a condition of project approval. Project applicant determines if any additional improvements are necessary. Project applicant installs any necessary improvements prior to issuance of building permits.	City Council and Planning Department Engineering/Building Divisions Engineering/Building Divisions	Draft and incorporate condition as part of project approval. Prior to approval of Tentative Maps, confirm the determination has been made. Prior to issuance of building permits, confirm that improvements have been installed.	Deny project approval. Deny Tentative Map approval. Deny issuance of building permits.	
Transportation and Traffic					
4.14-2 - The City shall coordinate with AC Transit to improve bus service to the Specific Plan area to lessen the impact of vehicular	Require as a condition of project approval.	City Council and Planning Division	Draft and incorporate condition as part of project approval.	Deny project approval.	

traffic on the local and regional roadways. Potential transit accommodations may include: • Implementation of shuttle service to the Ardenwood Park and Ride lot to provide a connection to the Dumbarton Express bus line and the Fremont and/or Union City BART stations; • Rerouting existing bus lines through the Specific Plan area to provide convenient stop(s) with bus shelters and benches; • Addition of a new bus line to serve the Specific Plan area.	City coordinates with AC Transit.	Planning Division	Prior to occupancy of any project within Specific Plan area.	Not Applicable	
4.14-8 - Prior to issuance of building permits for a Specific Plan use, the applicant shall pay all applicable transportation-related fees in accordance with the latest adopted fee schedule at the time permits are sought. Such fees shall include, but not be limited to, the City of Newark Capital Facilities Fee for Transportation, and the ACTC Regional Transportation Impact Fee.	Require as a condition of project approval. Project applicant pays fees.	City Council and Planning Division Building Division	Draft and incorporate condition as part of project approval. Prior to issuance of building permits, collect required fees.	Deny project approval. Deny issuance of building permits.	

Appendix B

Air Quality and Greenhouse Gas Emissions Technical Report for the FMC Willow and Grand Park Project

FMC Willow and Grand Park Project

Air Quality and Greenhouse Gas Emissions Technical Report

Prepared for:

City of Newark
Community Development Department
37101 Newark Boulevard
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December 2021 | 00357.00037.001

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TABLE OF CONTENTS

Section **Page**

EXECUTIVE SUMMARY ES-1

1.0 INTRODUCTION 1

1.1 Purpose of the Report 1
1.2 Project Location 1
1.3 Project Description 1
1.4 Project Design Features 2
1.5 Construction Activities and Phasing 4

2.0 AIR QUALITY 4

2.1 Air Quality Regulatory Setting 4
2.1.1 Air Pollutant Descriptors and Terminology 4
2.1.2 Federal Air Quality Regulations 6
2.1.3 State Air Quality Regulations 8
2.1.4 Local Regulations 10
2.2 Air Quality Existing Conditions 11
2.2.1 Climate/Meteorology 11
2.2.2 Monitored Air Quality 12
2.2.3 Sensitive Receptors 12
2.3 Air Quality Methodology 13
2.3.1 Construction Emissions 14
2.3.2 Operational Emissions 16
2.3.3 Impacts to New Sensitive Receptors 17
2.4 Air Quality Significance Criteria 19
2.4.1 Impacts to Sensitive Receptors 20
2.4.2 Odors 21
2.5 Air Quality Impact Analysis 21
2.5.1 PEIR Impact 4.2-1 21
2.5.2 PEIR Impact 4.2-2 26
2.5.3 PEIR Impact 4.2-3 31
2.5.4 PEIR Impact 4.2-4 32

3.0 GREENHOUSE GAS EMISSIONS 33

3.1 GHG Setting 33
3.1.1 Climate Change Overview 33
3.1.2 Greenhouse Gases 33
3.2 GHG Regulatory Framework 35
3.2.1 Federal GHG Regulations 35
3.2.2 California GHG Regulations 36
3.2.3 Regional GHG Policies and Plans 39
3.2.4 Local Greenhouse Gas Plans 40

TABLE OF CONTENTS (cont.)

Section			Page
	3.3	GHG Existing Conditions	40
		3.3.1 Worldwide and National GHG Inventory	40
		3.3.2 State GHG Inventories	40
		3.3.3 Regional GHG Inventory	41
	3.4	GHG Methodology	41
		3.4.1 Construction Emissions	41
		3.4.2 Operational Emissions	42
	3.5	GHG Significance Criteria	43
	3.6	GHG Impact Analysis	44
		3.6.1 PEIR Impact 4.6-1	44
		3.6.2 PEIR Impact 4.6-2	47
4.0	LIST OF PREPARERS		48
5.0	REFERENCES		49

LIST OF APPENDICES

A	CalEEMod Output
B	HRA Calculations and Model Output

LIST OF FIGURES

No.	Title	Follows Page
1	Vicinity Map	2
2	Aerial Map	2
3	Site Design	2
4	Modeled Receptor Locations	18

TABLE OF CONTENTS (cont.)

LIST OF TABLES

No.	Title	Page
1	Summary of Health Effects of Criteria Air Pollutants	6
2	Ambient Air Quality Standards	7
3	San Francisco Bay Area Air Basin Attainment Status	8
4	Air Quality Monitoring Data	12
5	Construction Equipment Assumptions	15
6	Anticipated Construction Schedule	16
7	BAAQMD Significance Thresholds	20
8	Unmitigated Maximum Daily Construction Emissions (Pounds Per Day)	22
9	Mitigated Maximum Daily Construction Emissions (Pounds Per Day)	23
10	Maximum Daily Operational Emissions (Pounds Per Day)	27
11	Annual Operational Emissions (Tons Per Year)	27
12	2024 Concurrent Daily Emissions (Pounds Per Day)	28
13	Project Residential Increased Incremental Cancer Risk from Train DPM	30
14	Global Warming Potentials and Atmospheric Lifetimes	35
15	California Greenhouse Gas Emissions By Sector	41
16	San Francisco Bay Area GHG Emissions By Sector	41
17	Construction GHG Emissions	45
18	Total Operational GHG Emissions	46

ACRONYMS AND ABBREVIATIONS

AAM	Annual Arithmetic Mean
AB	Assembly Bill
BAAQMD	Bay Area Air Quality Management District
BCMM	basic construction mitigation measure
C_2F_6	hexafluoroethane
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCR	California Code of Regulations
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEUS	California Commercial End Use Survey
CF_4	tetraflouromethane
CFC	chlorofluorocarbon
CH_4	methane
City	City of Newark
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
County	County of Alameda
DPM	diesel particulate matter
DRC	Dumbarton Rail Corridor
DRS	Dumbarton Rail Service
DTCS	Dumbarton Transportation Corridor Study
DU	dwelling unit
EO	Executive Order
GHG	greenhouse gas
GWP	global warming potential
HFC	hydrofluorocarbon
HRA	health risk assessment
IPCC	Intergovernmental Panel on Climate Change

ACRONYMS AND ABBREVIATIONS (cont.)

kW	kilowatt
kWhr	kilowatt hour
LCFS	Low Carbon Fuel Standard
mg/m^3	milligrams per cubic meter
MMT	million metric tons
MT	metric tons
mph	miles per hour
MPOs	Metropolitan Planning Organizations
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NHTSA	National Highway Traffic Safety Administration
NO	nitrogen oxide
NO_2	nitrogen dioxide
NOAA	National Oceanic and Atmospheric Administration
NO_X	nitrogen oxides
O_3	ozone
Pb	lead
PEIR	Bayside Newark TOD Specific Plan Program Environmental Impact Report
PFC	perfluorocarbon
PM_{10}	particulate matter less than 10 microns
$PM_{2.5}$	particulate matter less than 2.5 microns
ppm	parts per million
RASS	Residential Appliance Saturation Survey
ROG	reactive organic gas
RPS	Renewables Portfolio Standard
SamTrans	San Mateo County Transit District
SB	Senate Bill
SCS	Sustainable Communities Strategy
SF	square feet
SF_6	hexafluoride
SIP	State Implementation Plan
Specific Plan	Bayside Newark Transit Oriented Development Specific Plan
SO_2	sulfur dioxide
SO_X	sulfur oxides
SRA	source receptor area

ACRONYMS AND ABBREVIATIONS (cont.)

TAC	toxic air contaminant
TOD	Transit Oriented Development
UNFCCC	United Nations Framework Convention on Climate Change
USEPA	U.S. Environmental Protection Agency
VMT	vehicle miles traveled
VOC	volatile organic compound

EXECUTIVE SUMMARY

This report presents an assessment of potential air quality impacts and greenhouse gas (GHG) emissions associated with the construction and operation of the proposed FMC Willow and Grand Park Project (project) located in the City of Newark (City). This report also compares the project-specific impact conclusions with those evaluated in the Bayside Newark Transit Oriented Development (TOD) Specific Plan Program EIR (PEIR), formerly known as the Dumbarton TOD Specific Plan. The project would develop the 22.1-acre site within the Bayside Newark TOD Specific Plan Area with 370 townhomes and affordable housing units and 4,000 square feet of local-serving commercial space. The project would also develop the 5-acre Grand Park in the western portion of the project site. The project would dedicate 1.8 acres of land for a transit station for potential future passenger rail service on the Dumbarton Corridor.

The project would comply with the applicable mitigation measures pertaining to air quality and GHG emissions included in the Bayside Newark TOD Specific Plan PEIR, which this project analysis is tiered from. With implementation of the measure to require USEPA certified Tier 4 engines for off-road equipment to reduce NO_X and exhaust PM emissions that would be part of implementation of PEIR measure 4.2-1b, criteria pollutant and precursor pollutant emissions generated during project construction activities would not exceed the Bay Area Air Quality Management District's (BAAQMD's) thresholds. Long-term operational emissions of criteria pollutants and precursors would not exceed the BAAQMD thresholds, and the impacts would be less than significant.

Construction and operation of the project would not expose sensitive receptors to substantial concentrations of Toxic Air Contaminants (TACs), including diesel particulate matter (DPM) from potential future train service on the Dumbarton Corridor or buses from the proposed transit station. The project's contribution to area traffic would not result in carbon monoxide (CO) hotspots. Impacts related to exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

Neither construction activities nor long-term operation of the project would be a source of objectionable odors that would adversely affect a significant number of persons, and odor impacts would be less than significant.

Implementation of the project would result in GHG emissions per service population (e.g., per project residents and employees) of 1.90 metric tons (MT) of carbon dioxide equivalents (CO_2e) per year, below the adjusted threshold of 3.56 MT CO_2e per capita (the BAAQMD 2020 project level threshold, adjusted for the Senate Bill 32 GHG reduction mandates for the year 2025).

With future implementation of the Dumbarton Corridor passenger rail project, the project would be considered transit-oriented development and would result in reduced vehicle miles traveled (VMT) per capita compared to the regional average. The project would not conflict with the City's Climate Action Plan Initial Framework, General Plan, or the regional Sustainable Communities Strategy (SCS), *Plan Bay Area 2040*, adopted for the purpose of reducing the emissions of GHGs and regional VMT, and the impact would be less than significant.

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1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This report analyzes potential air quality and greenhouse gas (GHG) emissions impacts associated with the proposed FMC Willow and Grand Park Project (project).

The proposed project site is within the Bayside Newark TOD Specific Plan area (formerly known as the Dumbarton TOD Specific Plan), and the Program Environmental Impact Report (PEIR) for the Specific Plan (State Clearinghouse No. 2010042012) serves as the foundation document for subsequent projects proposed under the program. The Specific Plan area encompasses approximately 205 acres in the vicinity of the Dumbarton Rail Corridor (DRC). The purpose of the Bayside Newark TOD Specific Plan is to facilitate the development of a new neighborhood around a train station planned separately as part of the Dumbarton Rail Service (DRS) Project. The DRS is still under development and will undergo separate environmental analysis in accordance with the California Environmental Quality Act (CEQA). The proposed project is being analyzed in light of the prior certified Bayside Newark TOD Specific Plan PEIR as the next step in the City's CEQA process for implementation of projects within the approved Bayside Newark TOD Specific Plan.

1.2 PROJECT LOCATION

The proposed project site is located within the City of Newark (City) in southwestern Alameda County, northwest of the intersection of Willow Street and Enterprise Drive (see Figure 1, *Vicinity Map*, and Figure 2, *Aerial Map*).

1.3 PROJECT DESCRIPTION

The approximately 22.1-acre project site would be developed with high- and medium-density residential units and commercial retail space in four Planning Areas (PAs), a community park (Grand Park), and a future transit station site. PA1, in the eastern portion of the project site, would contain one 6-story mixed-use building with 90 multi-family affordable housing units plus 1 manager unit in five floors over approximately 4,000 square feet (SF) of ground-floor commercial retail space and ground-level parking. The mixed-use building would also contain community spaces for residents (e.g., clubroom, fitness room). PA2, in the northern portion of the project site, would contain 64 three-story single-family townhomes in 12 buildings in the northern portion of the project site. PA3 would contain 123 single-family townhomes in 16 buildings located in the southern portion of the project site. Forty-five of the units in PA3 along the frontage of Enterprise Drive would be four-story, and the remaining 78 units would be three-story buildings. PA4 would contain 92 three-story single-family townhomes in 14 buildings in the central/southern portion of the project site. PA4 would also include a 1,485-sf community building located on the eastern edge of the Grand Park. The total project dwelling units (DU) would be 370. The proposed project would dedicate 1.8 acres of land for a Transit Station with a potential future commuter rail platform north of PA1 and PA2. The project would include the construction of a four-lane entrance road to the transit station and other interim improvements to the transit station site. The approximately 5-acre Grand Park would be located in the western portion of the project site. Other project improvements would include internal streets, driveways, and surface parking areas; underground utilities and storm drains; internal public area landscaping; a pedestrian trail along the northern project site boundary; sidewalks and landscaping along Enterprise Drive and Willow Street;

and provide a 20-foot-wide trail corridor, containing a 12-foot-wide multi-purpose trail, that would transect the Grand Park and run along Enterprise Drive to Willow Street. It is anticipated that the proposed trail would be eligible to be part of the regional San Francisco Bay Trail (see Figure 3, *Site Design*).

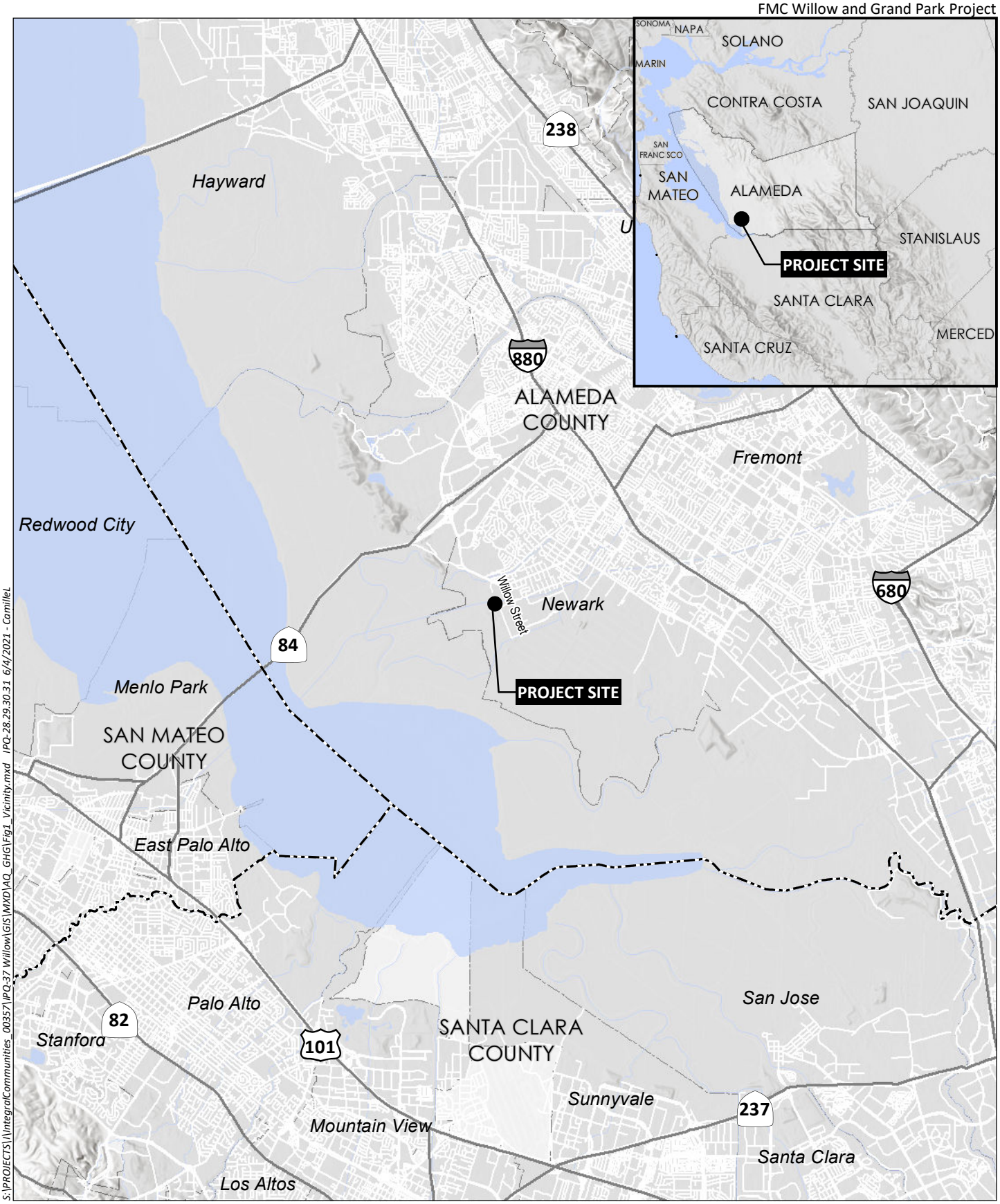
1.4 PROJECT DESIGN FEATURES

The project proposes to incorporate several features consistent with the intent of PEIR Mitigation Measure 4.6-1 to reduce GHG emission impacts, in compliance with requirements of the 2019 California Title 24 Part 6 building energy efficiency standards, the 2019 California Green Building Code (CALGreen) and City General Plan Policies. These features would increase energy efficiency, reduce area source pollutants, and reduce the operational GHG emissions. The following design features would be included as part of the project.

These features include, but are not limited to, the following:

- On-site solar electricity generation in accordance with 2019 Title 24.
- Sustainably designed plumbing systems and low-flow water fixtures.
- Efficient mechanical and electrical equipment, appliances, and lighting fixtures.
- Low-water landscape irrigation system.
- Low-water landscape practices such as use of soil amendments and top dressing for moisture retention, and placing trees to reduce heat gain on hard surfaces.
- Weather-based irrigation controllers.
- Drought-tolerant landscaping.
- Low-VOC flooring, paint, and construction adhesives.
- Low-VOC insulation.
- Shade trees in parking areas and throughout Project site.
- Residences would be within walking distance (0.25-mile) from a proposed future transit station.
- Bicycle parking provided throughout the project site.
- 10 percent of all open, uncovered parking spaces would be electrical vehicle charging stations.
- All private garages would be pre-wired for vehicle charging capability.

Consistent with Mitigation Measures 4.2-1a and 4.2-1b from the Bayside Newark TOD Specific Plan PEIR, control measures during project construction would include, but not be limited, to the following:

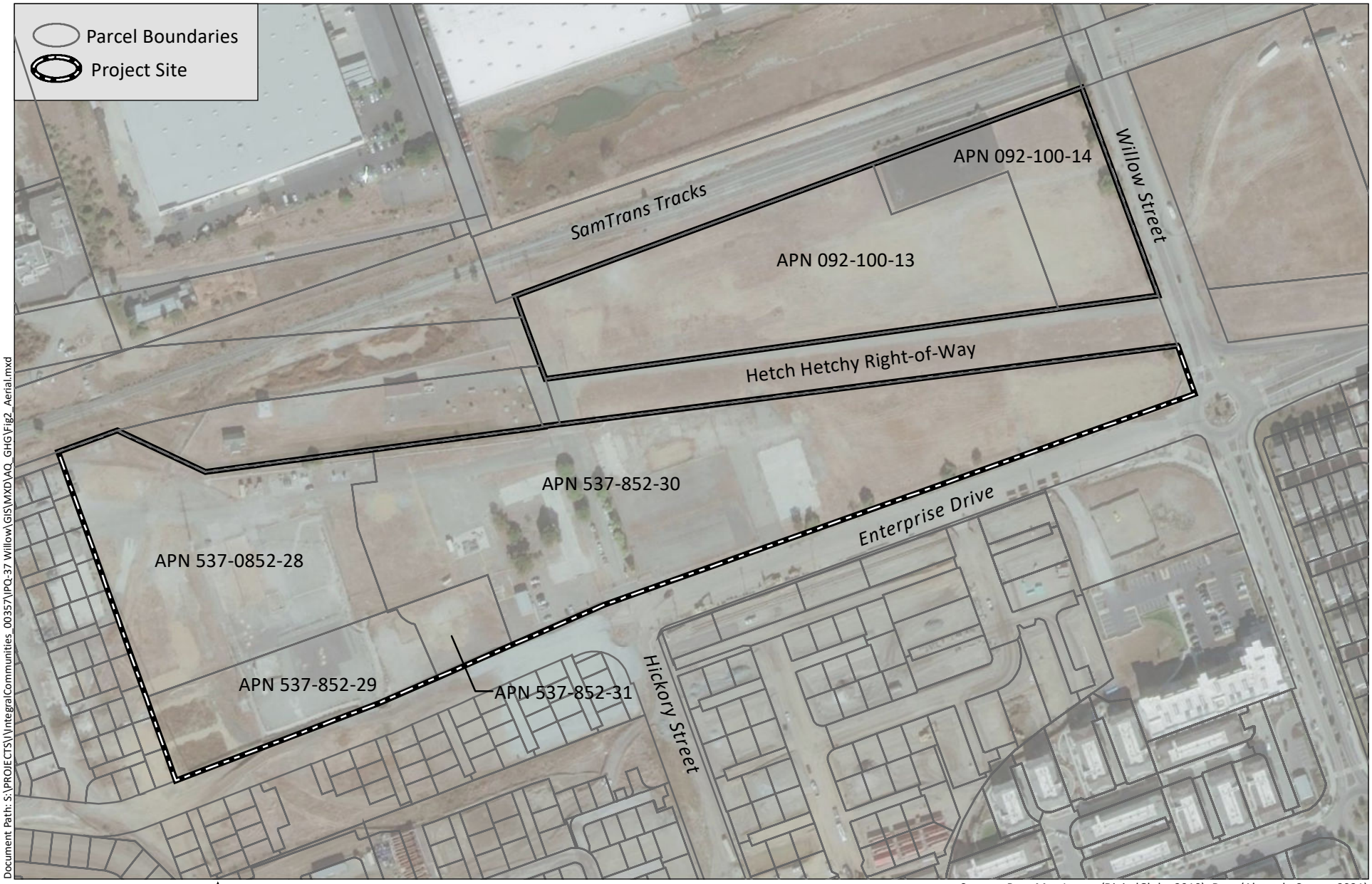


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HELIX Environmental Planning

Vicinity Map

Figure 1



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Source: Base Map Layers (DigitalGlobe 2019); Data (Alameda County 2021)

HELIX Environmental Planning

Aerial Map

Figure 2



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Source: Urban Arena 2022

HELIX Environmental Planning

Site Design

Figure 3

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day in order to maintain a minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

- All haul trucks transporting soil, sand, or other loose material off site shall be covered.

- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.

- All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).

- Roadways, driveways, and sidewalks will be paved early in construction phasing to minimize fugitive dust.

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time of diesel-powered construction equipment to 2 minutes. Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

- Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.

- Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas and watered appropriately until vegetation is established.

- The simultaneous occurrence of excavation, grading, and ground disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.

- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

- Site accesses to a distance of 100 feet from the paved road shall be treated with a 6- to 12-inch compacted layer of wood chips, mulch, or gravel.

- Sandbags or other erosion-control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

- The project shall develop a plan demonstrating that the off-road equipment (more than 50 horsepower [HP]) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) will achieve a U.S. Environmental Protection Agency (USEPA) Tier 4 or better engine standards for off-road engines.

- Use low VOC (i.e., reactive organic gases [ROG]) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).

- Require all off-road construction equipment, and generators with more than 50 HP be equipped with diesel particulate filter for emission reductions of particulate matter (PM) meeting the USEPA Tier 4 emissions requirements.

1.5 CONSTRUCTION ACTIVITIES AND PHASING

The project would be constructed in two phases. Phase 1 would consist of the construction of PA1, PA2, PA3, 66 DU in PA4, and the community building (4,000 SF of retail, 344 residential DU, and 1,485 SF community building). Construction of Phase 1 would commence in April 2022 and be completed in approximately 30 months (September 2024). Phase 2 would consist of the remaining 26 DU in PA4 and the Grand Park. Construction of Phase 2 would commence with grading as early as August 2022 and is anticipated to be complete by December 2024 but could be completed as early as October 2024 (27 months). Phase 2 construction activities would overlap the Phase 1 construction activities. Approximately 12,680 tons of old asphalt and concrete (338,000 sf) would be exported during site preparation and approximately 77,700 cubic yards of soil would be imported during grading (total grading approximately 22,100 cubic yards of cut and 99,800 cubic yards of fill) to raise the building pad elevations.

2.0 AIR QUALITY

2.1 AIR QUALITY REGULATORY SETTING

The project site is located within the San Francisco Bay Area Air Basin (SFBAAB). Air quality in the SFBAAB is regulated by the USEPA at the federal level, by the California Air Resources Board (CARB) at the state level, and by the Bay Area Air Quality Management District (BAAQMD) at the regional level.

2.1.1 Air Pollutant Descriptors and Terminology

2.1.1.1 Criteria Air Pollutants

Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the general public. In general, criteria air pollutants include the following compounds:

- Ozone (O_3)
- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Particulate matter (PM), which is further subdivided:
    - Coarse PM, 10 micrometers or less in diameter (PM_{10})
    - Fine PM, 2.5 micrometers or less in diameter ($PM_{2.5}$)
- Sulfur dioxide (SO_2)
- Lead (Pb)

Criteria pollutants can be emitted directly from sources (primary pollutants; e.g., CO, SO_2, PM_{10}, $PM_{2.5}$, and lead), or they may be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere (secondary pollutants; e.g., ozone, NO_2, PM_{10}, and $PM_{2.5}$). Note that PM_{10} and $PM_{2.5}$ can be both primary and secondary pollutants. The principal precursor pollutants of concern are reactive organic gases ([ROGs] also known as volatile organic compounds [VOCs])[1] and nitrogen oxides (NO_X).

The descriptions of sources and general health effects for each of the criteria air pollutants are shown in Table 1, *Summary of Health Effects of Criteria Air Pollutants*, based on information provided by the California Air Pollution Control Officers Association (CAPCOA 2018). Specific adverse health effects to individuals or population groups induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables such as cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individuals (e.g., age, gender). Criteria pollutant precursors (ROG and NO_X) affect air quality on a regional scale, typically after significant delay and distance from the pollutant source emissions. Health effects related to ozone and NO_2 are, therefore, the product of emissions generated by numerous sources throughout a region. Emissions of criteria pollutants from vehicles traveling to or from the project site (mobile emissions) are distributed nonuniformly in location and time throughout the region, wherever the vehicles may travel. As such, specific health effects from these criteria pollutant emissions cannot be directly correlated to the incremental contribution from the project.

2.1.1.2 Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness, or that may pose a present or potential hazard to human health. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is known as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter (CARB 2018a). Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, CARB identified DPM as a TAC based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a significant impact on California's population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2018a).

[1] CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.

Table 1
SUMMARY OF HEALTH EFFECTS OF CRITERIA AIR POLLUTANTS

Pollutant	Major Man-Made Sources	Human Health Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to climate change and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrogen oxides (NO_x) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Particulate Matter (PM_{10} & $PM_{2.5}$)	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and other sources.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO_2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned, when gasoline is extracted from oil, or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Lead	Metallic element emitted from metal refineries, smelters, battery manufacturers, iron and steel producers, use of leaded fuels by racing and aircraft industries.	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: CAPCOA 2018

2.1.2 Federal Air Quality Regulations

2.1.2.1 Clean Air Act

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to the health and welfare of the general public. The USEPA is responsible for enforcing the Federal Clean Air Act (CAA) of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are

anticipated. In response, the USEPA established both primary and secondary standards for several criteria pollutants, which are introduced above. Table 2, *Ambient Air Quality Standards*, shows the federal and state ambient air quality standards (AAQS) for these pollutants.

Table 2
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards Primary[1]	Federal Standards Secondary[2]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (137 µg/m^3)	Same as Primary
PM_{10}	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	12.0 µg/m^3	15.0 µg/m^3
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	1 Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	–
	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
SO_2	1 Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	24 Hour	0.04 ppm (105 µg/m^3)	–	–
Lead	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	Same as Primary
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	**No Federal Standards**	**No Federal Standards**
Sulfates	24 Hour	25 µg/m^3	**No Federal Standards**	**No Federal Standards**
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	**No Federal Standards**	**No Federal Standards**
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	**No Federal Standards**	**No Federal Standards**

Source: CARB 2016

[1] National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

[2] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

O_3: ozone; ppm: parts per million; µg/m^3: micrograms per cubic meter; PM_{10}: large particulate matter; AAM: Annual Arithmetic Mean; $PM_{2.5}$: fine particulate matter; CO: carbon monoxide; mg/m^3: milligrams per cubic meter; NO_2 nitrogen dioxide; SO_2: sulfur dioxide; km: kilometer; –: No Standard.

The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. Areas that do not meet the NAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. The area air quality attainment status of the SFBAAB, including Alameda County and the City of Newark, is shown in Table 3, *San Francisco Bay Area Air Basin Attainment Status*. The SFBAAB is currently in nonattainment for federal and state ozone and $PM_{2.5}$ standards. The SFBAAB is in state nonattainment for PM_{10} standards. Concentrations of all other pollutants meet state and federal standards.

Table 3
SAN FRANCISCO BAY AREA AIR BASIN ATTAINMENT STATUS

Pollutant	State of California Attainment Status	Federal Attainment Status
Ozone (1-hour)	Nonattainment	No Federal Standard
Ozone (8-hour)	Nonattainment	Nonattainment (marginal)
Suspended Particulate Matter (PM_{10})	Nonattainment	Attainment/Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment (moderate)
Carbon Monoxide (CO)	Attainment	Attainment/Unclassified
Nitrogen Dioxide ($N0_2$)	Attainment	Attainment/Unclassified
Lead	Attainment	Attainment/Unclassified
Sulfur Dioxide (SO_2)	Attainment	Attainment/Unclassified
Sulfates	Attainment	No Federal Standard
Hydrogen Sulfide	Unclassified	No Federal Standard
Visibility Reducing Particles	Unclassified	No Federal Standard

Sources: BAAQMD 2017a; CARB 2018b.

2.1.3 State Air Quality Regulations

2.1.3.1 California Clean Air Act

CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the seven criteria air pollutants listed above through the California Clean Air Act of 1988 (CCAA), and has also established CAAQS for additional pollutants, including sulfates, hydrogen sulfide (H_2S), vinyl chloride and visibility-reducing particles (see Table 1). Areas that do not meet the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. The SFBAAB is currently classified as a nonattainment area under the CAAQS for ozone (1-hour and 8-hour), PM_{10}, and $PM_{2.5}$ (BAAQMD 2017a). The current state attainment status for the SFBAAB is provided in Table 3.

CARB is the state regulatory agency with the authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The BAAQMD is responsible for developing and implementing the rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, developing of air quality management plans, and adopting and enforcing air pollution regulations within the SFBAAB.

2.1.3.2 State Implementation Plan

The CAA requires areas with unhealthy levels of ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, and sulfur dioxide to develop plans, known as State Implementation Plans (SIPs). SIPs

are comprehensive plans that describe how an area will attain the NAAQS. The 1990 amendments to the CAA set deadlines for attainment based on the severity of an area's air pollution problem.

SIPs are not single documents—they are a compilation of new and previously submitted plans, programs (e.g., monitoring, modeling, permitting), district rules, state regulations and federal controls. Many of California's SIPs rely on a core set of control strategies, including emission standards for cars and heavy trucks, fuel regulations and limits on emissions from consumer products. State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards the SIP revisions to the USEPA for approval and publication in the Federal Register. The Code of Federal Regulations (CFR) Title 40, Chapter I, Part 52, Subpart F, Section 52.220 lists all of the items which are included in the California SIP (CARB 2009). At any one time, several California submittals are pending USEPA approval.

2.1.3.3 California Energy Code

California Code of Regulations (CCR) Title 24 Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings, were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. Energy-efficient buildings require less electricity, natural gas, and other fuels. Electricity production from fossil fuels and on-site fuel combustion (typically for water heating) results in GHG emissions.

The Title 24 standards are updated approximately every three years to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Title 24 standards went into effect on January 1, 2020. The 2019 update to the Building Energy Efficiency Standards focuses on several key areas to improve the energy efficiency of newly constructed buildings and additions and alterations to existing buildings. The most significant efficiency improvements to the residential standards is a requirement for onsite photovoltaic electricity generation (e.g., solar panels) for most new or modified residential building up to three stories high.

The standards are divided into three basic sets. First, there is a basic set of mandatory requirements that apply to all buildings. Second, there is a set of performance standards – the energy budgets – that vary by climate zone (of which there are 16 in California) and building type; thus, the standards are tailored to local conditions. Finally, the third set constitutes an alternative to the performance standards, which is a set of prescriptive packages that are basically a recipe or a checklist compliance approach. Future development per the proposed project would be required to be designed to meet the current Title 24 energy efficiency standards.

2.1.3.4 Toxic Air Contaminants

The Health and Safety Code (§39655, subd. (a)) defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the CAA (42 United States Code Sec. 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

2.1.4 Local Regulations

2.1.4.1 Bay Area Air Quality Management District

2017 Clean Air Plan

The BAAQMD is responsible for preparing plans to attain ambient air quality standards in the SFAAB. The BAAQMD prepares ozone attainment plans for the national ozone standard and clean air plans for the California standard, both in coordination with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG).

The BAAQMD adopted the 2017 Clean Air Plan in April 2017. The plan addresses nonattainment of the federal 1-hour ozone standard and sate 1-hour and 8-hour standards in the SFBAAB, as well as nonattainment of federal and state PM standards. The 2017 Clean Air Plan establishes a program of rules and regulations directed at reducing air pollutant emissions and achieving California and national air quality standards. The plan's pollutant control strategies are based on the latest scientific and technical information and planning assumptions, updated emission inventory methodologies for various source categories, and the latest population growth projections and vehicle miles traveled (VMT) projections for the region. The 2017 Clean Air Plan defines a control strategy that the BAAQMD and its partners will implement to (1) reduce emissions and decrease ambient concentrations of harmful pollutants; (2) safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, with an emphasis on protecting the communities most heavily impacted by air pollution; and (3) reduce greenhouse gas emissions to protect the climate. It is important to note that in addition to updating the previously prepared ozone plan, the 2017 Clean Air Plan also serves as a multipollutant plan to protect public health and the climate. In its dual role as an update to the state ozone plan and a multipollutant plan, the 2017 Clean Air Plan addresses four categories of pollutants (BAAQMD 2017c):

- Ground-level ozone and its key precursors, ROG, and NO_X
- Particulate matter: primary $PM_{2.5}$, as well as precursors to secondary $PM_{2.5}$
- Air toxics
- GHGs

The 2017 Clean Air Plan includes local guidance for the State Implementation Plan, which includes the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards.

Regulations and Rules

The following BAAQMD regulations and rules would be applicable to the project:

Regulation 6, **Rule 3**, **Wood-burning Devices**: Prohibits the installation of wood-burning devices (e.g., fireplace and woodstoves) in new residential construction.

Regulation 6, **Rule 6**, **Prohibition of Trackout**: limits the quantity of fugitive dust in the atmosphere through control of trackout of solid materials onto paved public roads outside the boundaries of large construction sites (more than 1 acre).

Regulation 8, **Rule 3**, **Architectural Coatings**: limits the VOC content of architectural coatings (e.g., paint) manufactured, sold, supplied, or applied in the SFAAB.

2.2 AIR QUALITY EXISTING CONDITIONS

The project site is vacant following soil remediation that removed industrial contaminants that were remnants of prior uses. The project site is bordered by Enterprise Drive to the south, Willow Street to the east, and a 100-foot-wide right-of-way for the Dumbarton Rail Corridor (owned by SamTrans) to the north. Although there are old train tracks within the right-of-way, the Dumbarton Rail Corridor is not currently active and has no train traffic. Surrounding land uses include a residential development project under construction at the time of this analysis across Enterprise Drive to the south, a single-family residential neighborhood across Willow Street to the southeast, industrial/warehouse buildings across the train tracks to the north, and vacant land to the west and across Willow Street to the east. Terrain in the area surrounding the project site is primarily flat. Elevations on the project site are between approximately 9 feet and 12 feet (NGVD29) from west to east.

2.2.1 Climate/Meteorology

The project site is located within the SFBAAB in the western portion of Alameda County. The SFBAAB comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County.

Temperature inversion layers (inversions; layers of warmer air over colder air) affect air quality conditions because they influence the mixing depth (i.e., the vertical depth in the atmosphere available for diluting air contaminants near the ground). The highest air pollutant concentrations in the SFBAAB generally occur during inversions. There are two types of inversions that occur regularly in the SFBAAB. The frequent occurrence of elevated inversions in summer and fall months acts to cap the mixing depth, limiting the depth of air available for dilution. Elevated inversions are caused by subsiding air from the subtropical high-pressure zone, and from the cool marine air layer that is drawn into the SFBAAB by the heated low-pressure region in the Central Valley. The inversions typical of winter, called radiation inversions, are formed as heat quickly radiates from the earth's surface after sunset, causing the air in contact with it to rapidly cool. Radiation inversions are strongest on clear, low-wind, cold winter nights, allowing the build-up of such pollutants as carbon monoxide and particulate matter. Mixing depths under these conditions can be as shallow as 50 to 100 meters, particularly in rural areas.

There are 11 climatological subregions within the SFBAAB. The project site is in the Southwestern Alameda County climatological subregion of the air basin. This subregion encompasses the southeast side of San Francisco Bay, from Dublin Canyon to north of Milpitas. The subregion is bordered on the east by the East Bay hills and on the west by the bay. This climate of this subregion is affected by its proximity to San Francisco Bay and, to a lesser extent, by marine air entering through the Golden Gate. The bay cools the air during warm weather and during cold weather the bay warms the air. The normal northwest wind pattern carries this air onshore. Bay breezes push cool air onshore during the daytime and draw air from the land offshore at night. Winds are predominantly out of the northwest during the summer months. In the winter, winds are equally likely to be from the east. Wind speeds are moderate in this subregion, with annual average wind speeds close to the bay at about 7 miles per hour. During the summer months, average maximum temperatures are in the mid-70s degrees Fahrenheit (°F). Average maximum winter temperatures are in the high 50s to low 60s °F. Average minimum temperatures are in the low 40s °F in the winter and the mid-50s °F in the summer. Pollution potential is relatively high in this subregion during the summer and fall, and moderate during the winter. Air pollution sources include light and heavy industry, and motor vehicles (BAAQMD 2017b).

2.2.2 Monitored Air Quality

The BAAQMD operates a network of ambient air monitoring stations throughout the SFBAAB. The air quality monitoring station most representative of conditions at the project site is the Hayward-La Mesa Monitoring Station, approximately 18 miles north of the project site. The Hayward-La Mesa Station only monitors ozone. Data for the other criteria pollutants were obtained from the San Jose-Jackson Street Monitoring Station, approximately 15 miles southeast of the project site. The are no monitoring stations in the SFBAAB for SO_2 or Lead. The ambient pollutant concentrations collected at the stations during the last 3 available years (2018 through 2020) are shown in Table 4, *Air Quality Monitoring Data*. The data indicates exceedance of the state 1-hour ozone standard on 2 days in 2019 and 3 days in 2020, exceedance of the state and federal 8-hour ozone standard on multiple days in 2018 through 2020; exceedance of the PM_{10} standards on multiple days in 2018 through 2020; and exceedance of the federal $PM_{2.5}$ standard on multiple days in 2018 and 2020, but none in 2019. Data for NO_2 showed no exceedances from 2018 through 2020.

Table 4
AIR QUALITY MONITORING DATA

Pollutant Standard	2018	2019	2020
Ozone (O_3) Hayward Monitoring Station			
Maximum 1-hour concentration (ppm)	0.075	0.106	0.116
Days above 1-hour state standard (0.09 ppm)	0	2	3
Maximum 8-hour concentration (ppm)	0.066	0.085	0.092
Days above 8-hour state standard (0.070 ppm)	0	2	5
Days above 8-hour federal standard (0.070 ppm)	0	2	4
Coarse Particulate Matter (PM_{10}) San Jose Monitoring			
Maximum 24-hour concentration (μg/m^3)	121.8	77.1	137.1
Estimated Days above state standard (50 μg/m^3)	12.2	11.8	29.9
Estimated Days above federal standard (150 μg/m^3)	0	0	0
Fine Particulate Matter (PM2.5) San Jose Monitoring Station			
Maximum 24-hour concentration (μg/m^3)	133.9	27.6	120.5
Estimated Days above federal standard (35 μg/m^3)	15.5	0	12.0
Nitrogen Dioxide (NO_2) San Jose Monitoring Station			
Maximum 1-hour concentration (ppb)	86.1	59.8	51.9
Days above state 1-hour standard (180 ppb)	0	0	0

Source: CARB 2021.
ppb = parts per billion; ppm = parts per million; μg/m3 = micrograms per cubic meter.

2.2.3 Sensitive Receptors

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005, OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers.

The closest existing sensitive receptors to the project site are single-family homes approximately 190 feet southeast, across Willow Street and Enterprise Drive. In addition, a residential development, under construction at the time of this analysis, is located approximately 100 feet south of the project site, across Enterprise Drive. The closest school to the project site is the August Schilling Elementary School, approximately 1,450 feet northeast.

2.3 AIR QUALITY METHODOLOGY

Air emissions from mobile, area, and energy sources were calculated using CalEEMod, version 2020.4.0. CalEEMod is a computer model used to estimate air emissions resulting from land development projects throughout the state of California. CalEEMod was developed by CAPCOA in collaboration with the California air quality management and pollution control districts, primarily the South Coast Air Quality Management District (SCAQMD). The calculation methodology, source of emission factors used, and default data is described in the CalEEMod User's Guide, and Appendices A, D, and E (CAPCOA 2021).

In brief, CalEEMod is a computer model that estimates criteria air pollutant and greenhouse gas emissions from mobile (i.e., vehicular) sources, area sources (fireplaces, woodstoves, and landscape maintenance equipment), energy use (electricity and natural gas used in space heating, ventilation, and cooling; lighting; and plug-in appliances), water use and wastewater generation, and solid waste disposal. Emissions are estimated based on land use information input to the model by the user.

In the first module, the user defines the specific land uses that will occur at the project site. The user also selects the appropriate land use setting (urban or rural), operational year, location, climate zone, and utility provider. The input land uses, size features, and population are used throughout CalEEMod in determining default variables and calculations in each of the subsequent modules. The input land use information consists of land use subtypes (such as the residential subtypes of single-family residential and multi-family medium-rise residential) and their unit or square footage quantities.

Subsequent modules include construction (including off-road vehicle emissions), mobile (on-road vehicle emissions), area sources (woodstoves, fireplaces, consumer products [cleansers, aerosols, solvents], landscape maintenance equipment, architectural coatings), water and wastewater, and solid waste. Each module comprises multiple components including an associated mitigation module to account for further reductions in the reported baseline calculations. Other inputs include trip generation rates, trip lengths, vehicle fleet mix (percentage autos, medium truck, etc.), trip distribution (i.e., percent work to home, etc.), duration of construction phases, construction equipment usage, grading areas, season, and ambient temperature, as well as other parameters.

In various places the user can input additional information and/or override the default assumptions to account for project- or location-specific parameters. For this assessment, the default parameters were not changed unless otherwise noted. The CalEEMod output files are included in Appendix A to this report.

2.3.1 Construction Emissions

Based on a conservative estimate (earliest and highest intensity of construction activities) of the project construction timeline provided by the project applicant, Phase 1 construction would begin in April 2022 and be completed in September 2024 for a total construction period of 30 months, and Phase 2 construction would begin in August 2022 and could be completed as early as October 2024 for a total construction period of 27 months. Phase 2 construction would overlap the Phase 1 construction period. However, each work crew and their equipment would start Phase 2 construction at the conclusion of their respective Phase 1 activity (there would be no duplication of construction equipment or work crews between Phase 1 and Phase 2). For construction modeling purposes, all Phase 2 construction activities which occur concurrently with Phase 1 construction are included in the Phase 1 construction model, including grading for the Grand Park. Phase 2 construction modeling only includes the unfinished portion of building construction and architectural coatings. The quantity, duration, and intensity of construction activity influence the amount of construction emissions and related pollutant concentrations that occur at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction activity is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of (1) a more modern and cleaner-burning construction equipment fleet mix than assumed in CalEEMod, and/or (2) a less intensive buildout schedule (i.e., fewer daily emissions occurring over a longer time interval).

Construction activities would include demolition, grading and installation of underground utilities, paving, construction of structures, and architectural coating (e.g., painting). Grading includes site preparation (e.g., grubbing and clearing) using the same equipment. During demolition, an export of approximately 12,680 tons of old concrete/asphalt is anticipated. During grading, an import of approximately 77,700 cubic yards of soil is anticipated.

Construction would require heavy equipment during demolition, grading, underground utilities, paving and building construction. Construction equipment estimates are based on information provided by the project applicant/engineer and on default values in CalEEMod. Table 5, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in each stage of construction.

Table 5
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Activity	Equipment	Number
Phase 1		
Demolition	Concrete/Industrial Saws	2
	Excavators	2
	Rubber Tired Dozers	1
	Tractors/Loaders/Backhoes	2
	Dump Trucks	2
	Water Trucks	1
Grading	Excavators	2
	Graders	2
	Rubber Tired Dozers	2
	Scrapers	4
	Tractors/Loaders/Backhoes	2
	Dump Trucks	1
	Water Trucks	1
Underground Utilities	Cement and Mortar Mixers	1
	Excavators	2
	Tractors/Loaders/Backhoes	2
	Dump Trucks	2
Paving	Cement and Mortar Mixers	2
	Pavers	2
	Paving Equipment	2
	Rollers	2
	Tractors/Loaders/Backhoes	2
	Dump Trucks	1
Building Construction	Aerial Lifts	4
	Air Compressors	8
	Cranes	4
	Forklifts	4
	Generator Sets	8
	Tractors/Loaders/Backhoes	2
	Welders	4
Architectural Coating	Air Compressors	1
Phase 2		
Building Construction	Aerial Lifts	4
	Air Compressors	8
	Cranes	4
	Forklifts	4
	Generator Sets	8
	Tractors/Loaders/Backhoes	2
	Welders	4
Architectural Coating	Air Compressors	1

Source: CalEEMod (output data, including equipment hp, is provided in Appendix A).

The construction schedule was determined from estimates provided by the project applicant/engineer and using CalEEMod defaults and standard assumptions for similarly sized projects, taking into consideration the features of the project and the overall estimated construction schedule. Architectural coating is assumed to occur concurrently with the last seven months of building construction. The construction schedule assumed in the modeling is shown in Table 6, *Anticipated Construction Schedule*.

Table 6
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Start	End	Number of Working Days
Phase 1 and 2 Demolition	4/1/2022	4/21/2021	15
Phase 1 and 2 Grading	4/22/2022	9/19/2022	107
Phase 1 and 2 Underground Utilities	9/20/2022	9/19/2023	261
Phase 1 and 2 Paving	9/20/2023	10/10/2023	15
Phase 1 and 2 Building Construction	3/1/20223	9/26/2024	412
Phase 1 and 2 Architectural Coating	3/29/2024	9/26/2024	130
Phase 2 Building Construction	10/1/2024	10/31/2024	23
Phase 2 Architectural Coating	10/1/2024	10/31/2024	23

Source: CalEEMod (output data is provided in Appendix A).

The modeled mitigated construction emissions assume implementation of the BAAQMD basic construction measures, specifically watering exposed areas twice per day and limiting vehicle speeds on unpaved surfaces to 15 mph, as required by the PEIR Mitigation Measure 4.2-1a and 4.2-1b, as described further in Section 2.5.2.2, listed below. The modeled construction emissions also assume the use of USEPA Tier 4 diesel engine standards for off-road construction equipment with more than 50 horsepower (hp), as listed below.

2.3.2 Operational Emissions

2.3.2.1 Area Sources

Area sources include emissions from landscaping equipment, the use of consumer products, the reapplication of architectural coatings for maintenance, and hearths. Per project information supplied by the project applicant, no wood burning or natural gas hearths (i.e., woodstoves or fireplaces) would be installed in the project residences.

2.3.2.2 Energy Sources

The project would use electricity and natural gas for lighting, heating, and cooling. Electricity generation typically entails the combustion of fossil fuels, including natural gas and coal, which are then stored and transported to end users. Electricity and natural gas would be supplied by Pacific Gas and Electric (PG&E). Energy source emissions were estimated assuming implementation of energy-reducing project design features to comply with the 2019 Title 24 standards which include a requirement for on-site generation of electricity through photovoltaic (solar) panels. The project's Title 24 solar energy generation requirements are discussed in Section 3.4, below.

2.3.2.3 Vehicular (Mobile) Sources

Operational emissions from mobile source emissions are associated with vehicle trip generation and trip length. Based on the trip generation rate from the project trip generation analysis, the project would generate 1,824 average daily trips (Fehr & Peers 2021). However, the trip generation analysis used older project data that assumed more residential units (377) and retail space (12,100 SF) than the proposed project. Trip generation rates used in the modeling were calculated from the trip generation data. The trip generation rates include trip reductions for internalization. Therefore, no pass-by or linked trip reductions were included in the modeling. The option to include the CARB off-model SAFE rule adjustments to emissions factors for light duty gasoline powered vehicles in CalEEMod was selected (available in CalEEMod version 2020.4.0).

2.3.3 Impacts to New Sensitive Receptors

The project would site new sensitive receptors near the proposed transit station and train tracks. For the purposes of this study, it is assumed that the Dumbarton Rail Corridor passenger rail will be constructed in the future and include a transit stop near the project site as planned. Therefore, a health risk assessment (HRA) was completed to estimate the potential risks to future residents for exposure to DPM from potential future trains traveling on the tracks and idling at the transit station platform. The Dumbarton Rail Corridor was acquired by SamTrans in 1988 and several plans for the restoration of the tracks and bridges have been proposed. No plans, schedules, or funding for implementation of rail service in the Dumbarton Rail Corridor have been approved. The PEIR assumed six commuter rail trains per day would eventually use the corridor and stop at the transit station platform. Since the PEIR was certified, the Dumbarton Transportation Corridor Study (DTCS) was released in August 2017. This study analyzed 10 transportation alternatives ranging from improvements to existing highways and highway bridges to new tracks and rail bridges that would connect to the Caltrain commuter rail system in Redwood City and continue to San Francisco (San Mateo County Transit District 2017). Environmental review of the DTCS is in progress at the time of this analysis, and no preferred alternative from the DTCS has been publicly identified.

The HRA was completed for two scenarios. The first scenario analyzed is the 6 trains per day assumed in the PEIR, assuming diesel locomotives pulling passenger cars similar to existing diesel trains in use by Caltrain. The second scenario analyzed is the maximum anticipated rail traffic scenario in the DTCS, which would use diesel or electric multiple-unit trains (self-propelled trains, no locomotives). The earliest anticipated train service in the DTCS would start in 2028. The HRA was completed following OEHHA's *Air Toxics Hot Spots Program – Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments* (2015).

2.3.3.1 Estimation of Emissions

Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is 1 micron or less in diameter (CARB 2018a). Therefore, it was conservatively assumed that all PM_{10} emissions from diesel-powered vehicle exhaust emissions are DPM. Emissions factors were estimated using the USEPA fact sheet *Emission Factors for Locomotives* (USEPA 2009). Emission factors per train traveling past the project site were modeled assuming the train would approach the platform at idle (approximately 4 percent load factor; braking from 50 mph), idle at the platform for 60 seconds, then accelerate away from the platform at throttle notch 7 of 8 (approximately 84 percent load factor) to 50 mph. For Scenario 1, 6 trains per day were modeled assuming a configuration typical for current local service Caltrain

commuter trains in operation from San Jose to San Francisco: a 3,200 hp diesel locomotive pulling 5 or 6 passenger cars. The locomotives were modeled assuming the average USEPA emissions for locomotives in 2028 (a mix of Tier 0 through Tier 4 engines). For Scenario 2, 25 trains per day (sufficient to carry the maximum anticipated ridership in the DTCS) were modeled assuming a diesel multiple-unit (DMU) train similar to those in service for Sonoma–Marin Area Rail Transit: one powered passenger car with a total of 1,200 hp USEPA Tier 4 diesel engines pulling one or two unpowered passenger cars. The complete calculation sheets are included in Appendix B, *HRA Calculations and Model Output*, to this report.

2.3.3.2 Dispersion Modeling

Localized concentrations of pollutants were modeled using the Lakes AERMOD View version 10.0.1. The Lakes program utilizes the USEPA's AERMOD gaussian air dispersion model. Emissions from moving trains on the tracks in the project vicinity were modeled as a volume line sources from approximately 250 meters (820 feet) before the platform to approximately 250 meters after the platform. Initial plume dispersion parameters were set using the USEPA haul road modeling parameter recommendations (USEPA 2011) and the typical locomotive height and width. Trains idling at the platform were modeled as a volume line source the approximate length of the platform.

CARB provides pre-processed meteorological data suitable for use with AERMOD (CARB 2015). The available data set most representative of conditions in the project vicinity was from the Oakland International Airport station, approximately 16 miles northwest of the project site. The Oakland International Airport data set includes five years of data collected from 2009 to 2013. Urban dispersion coefficients were selected in the model to reflect the future developed nature of the project site and the region downwind (southeast).

United States Geological Survey (USGS) National Elevation Dataset (NED) files with a 10-meter resolution covering an area approximately one mile around the project site were used in the model to cover the analysis area. Terrain data was imported to the model using AERMAP (a terrain preprocessing program for AERMOD).

The DPM emissions were modeled as variable emissions by hour-of-day and weekday/weekend with each hour set as a fraction of the peak hour emissions based on the 2019 Caltrain Redwood City train schedule (Caltrain 2019). The schedule for Redwood City shows trains operating from 5:00 a.m. to 1:00 a.m. with the peak hour on weekdays from 8:00 a.m. to 9:00 a.m. The complete table of variable emissions fractions are included in Appendix B to this report.

The Lakes AERMOD View output reports (which include all modeling parameters selected) are included in Appendix B to this report.

2.3.3.3 Risk Determination

Discrete receptors were placed in the model at estimated representative locations of ground level outdoor spaces for the eleven closest townhome residential units to the train tracks, as shown in Figure 4, *Modeled Receptor Locations*. The height of the receptors (flagpole height) was set to four feet above the ground level, representing the average breathing height for a standing individual.

Health risks resulting from localized concentration of DPM were estimated using the CARB Hotspots Analysis and Reporting Program (HARP), Air Dispersion Modeling and Risk Tool (ADMRT) version 21081.



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Source: Urban Arena 2021

HELIX Environmental Planning

Modeled Receptor Locations

Figure 4

The plot files of localized concentrations from AERMOD were imported into the ADMRT model to determine health risks. The model conservatively assumes that residents would be standing and breathing on the apartment balconies every day between 17 and 21 hours per day (depending on the age group, starting with fetuses in utero in the third trimester of pregnancy) for 30 years. The OEHHA derived intake rate percentile method was selected. The output of the dispersion modeling provides unitized ground level concentrations of the modeled constituent in micrograms per cubic meter for the maximum one-hour and the average over the five-year period of the meteorological data. An inventory of maximum hourly and average annual emissions for each source of TACs was entered in the ADMRT program. The ADMRT combines the emissions inventory, the ground level concentration plots from AERMOD, and pollutant-specific risk factors to determine the health risks at each receptor point identified in the model. The ADMRT output files are included in Appendix B to this report.

2.4 AIR QUALITY SIGNIFICANCE CRITERIA

Consistent with the significance thresholds included in the PEIR, the project would have a significant impact to air quality if it would result in any of the following:

(1) Conflict with or obstruct implementation of the applicable air quality plan;

(2) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

(3) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard;

(4) Expose sensitive receptors to substantial pollutant concentrations; or

(5) Create objectionable odors affecting a substantial number of people.

The final determination of whether or not a project has a significant effect is within the purview of the lead agency pursuant to CEQA Guidelines Section 15064(b). The BAAQMD has adopted thresholds which lead agencies can use to determine the significance of a development project's short-term construction and long-term operational pollutant emissions. The BAAQMD's 2017 thresholds of significance for criteria pollutant and precursors are shown in Table 7, *BAAQMD Significance Thresholds* (BAAQMD 2017b). Refer to Section 3.0, *Greenhouse Gas Emissions,* for a discussion of GHG emissions thresholds. For construction fugitive dust, rather than a numeric threshold BAAQMD recommends that lead agencies consider projects which implement the Basic Construction Mitigation Measures (BCMMs) to have a less than significant impact related to fugitive dust (BAAQMD 2017b). The PEIR Mitigation Measure 4.2-1a requires implementation of the BCMMs.

Table 7
BAAQMD SIGNIFICANCE THRESHOLDS

Pollutant	Construction	Operation	Operation
	Average Daily Emissions (pounds/day)	Average Daily Emissions (pounds/day)	Maximum Annual Emissions (tons/year)
Reactive Organic Gasses (ROG)	54	54	10
Nitrogen Oxides (NO_X)	54	54	10
Particulate Matter Exhaust (PM_{10})	82	82	15
Fine Particulate Matter Exhaust ($PM_{2.5}$)	54	54	10
PM_{10} and $PM_{2.5}$ Fugitive Dust	BCMMs[1]	none	none
Local Carbon Monoxide (CO)	none	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)	9.0 ppm (8-hour average), 20.0 ppm (1-hour average)
Sulfur Oxides (SO_X)	none	none	none

Source: BAAQMD 2017b.

ppm = part per million; BCMMs = Basic Construction Mitigation Measures

[1] For construction fugitive dust, rather than a numeric threshold BAAQMD recommends that lead agencies consider projects which implement the Basic Construction Mitigation Measures to have a less than significant impact related to fugitive dust.

2.4.1 Impacts to Sensitive Receptors

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as TACs or Hazardous Air Pollutants (HAPs).

With regard to evaluating whether a project would have a significant impact on sensitive receptors, air quality regulators typically define sensitive receptors as schools (preschool through 12th grade), hospitals, resident care facilities, day-care centers, or other facilities that may house individuals with health conditions that would be adversely impacted by changes in air quality. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent because the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public. Any project that has the potential to directly impact a sensitive receptor located within one-quarter mile and results in an increased cancer risk greater than 10 in 1 million would have a potentially significant impact.

The BAAQMD's significance thresholds for local community risk and hazard impacts apply to both the siting of a new source and to the siting of a new receptor. Local community risk and hazard impacts are associated with TACs and $PM_{2.5}$ because emissions of these pollutants can have significant health impacts at the local level. The City of Newark is not in one of the six affected communities identified in BAAQMD's CARE program. The City of Newark and Alameda County do not have a qualified risk reduction plan for this area. For assessing community risk and hazards, TAC sources within a 1,000-foot radius are considered. Sources are defined as freeways, high volume urban roadways (with volume of 100,000 vehicles or more per day), distribution centers, and permitted sources of TACs.

2.4.2 Odors

BAAQMD's thresholds for odors are qualitative. The BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants.

2.5 AIR QUALITY IMPACT ANALYSIS

Air quality is discussed in Chapter 4.2 of the PEIR prepared for the Bayside Newark TOD Specific Plan (City 2011).

2.5.1 PEIR Impact 4.2-1

Short-term construction activities associated with the proposed project could result in significant air pollutant emissions (significance thresholds 2 and 4).

2.5.1.1 Construction Emissions Conclusions in the PEIR

The PEIR concluded that, due to the extent of the development allowed under the Specific Plan and the amount of earthwork that would be involved, construction emissions have the potential to violate Federal and State ambient air quality standards. Implementation of the Bayside Newark TOD Specific Plan PEIR Mitigation Measures 4.2-1a and 4.2-1b would require implementation of BAAQMD's BCMMS and BAAQMD's "additional construction mitigation measures." Implementation of Mitigation Measures 4.2-1a and 4.2-1b would reduce short-term construction emissions of criteria pollutants to a less than significant level.

2.5.1.2 Project-Specific Construction Emissions Analysis

Construction Criteria Pollutant and Precursor Emissions

The project's temporary construction emissions were estimated using CalEEMod as described in Section 2.3 above. The results of the modeling of the project's construction emissions of criteria pollutants and precursors for Phases 1 and 2, and for the combined Phase 1 building construction, Phase 2 architectural coatings, and Phase 2 building construction (which would overlap) are shown in Table 8, *Unmitigated Maximum Daily Construction Emissions*. For informational purposes, the analysis provides the project-specific emissions without incorporation of required mitigation measures from the PEIR. The data are presented as the maximum anticipated daily emissions for comparison with the BAAQMD thresholds. The complete CalEEMod output is provided in Appendix A to this report.

Table 8
UNMITIGATED MAXIMUM DAILY CONSTRUCTION EMISSIONS (POUNDS PER DAY)

Construction Activity	ROG	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Phase 1 and 2 Demolition	5.2	56.4	39.2	0.1	19.8	2.1	3.2	1.9
Phase 1 and 2 Grading	8.1	94.3	57.8	0.2	20.4	3.4	7.8	3.1
Phase 1 and 2 Underground Utilities	1.9	15.9	18.6	0.0	0.2	0.7	0.1	0.6
Phase 1 and 2 Paving	3.4	20.9	24.3	0.1	0.7	0.8	0.2	0.8
Phase 1 Building Construction	8.7	68.092	84.8	0.2	3.8	3.0	1.0	2.9
Phase 1 Architectural Coating	28.1	1.4	3.5	0.0	0.6	0.1	0.2	0.1
Phase 2 Building Construction	7.4	61.4	77.4	0.1	1.2	2.6	0.3	2.5
Phase 2 Architectural Coatings	14.5	1.3	2.3	0.0	0.2	0.1	0.1	0.1
Concurrent Activities								
2022 Building Construction + Underground Utilities	10.7	84.0	103.4	0.2	4.0	3.7	1.1	3.5
2023 Building Construction + Paving	17.7	138.2	169.9	0.4	7.5	6.1	2.0	5.9
2024 Phase 1 Building Construction + Phase 1 Architectural Coating	31.5	22.3	27.8	0.1	1.3	0.9	0.3	0.8
2024 Phase 2 Building Construction + Phase 2 Architectural Coating	21.9	62.6	79.7	0.2	1.4	2.7	0.4	2.6
Maximum Daily Emissions	**31.5**	**132.8**	**169.9**	**0.4**	**7.5**	**6.1**	**2.0**	**5.9**
BAAQMD Thresholds	*54*	*54*	*none*	*none*	*BMPs*	*84*	*BMPs*	*54*
Exceed Thresholds?	***No***	***Yes***	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A).

As shown in Table 8, maximum daily emissions of ROG concurrent Phase 1 building construction and architectural coating. Maximum daily emissions of NO_X would occur during grading, and maximum daily emissions of constructional other pollutants would occur during concurrent 2022 building construction and underground utilities. Emissions of NO_X during Phase 1 grading would be 138.2 pounds per day and would exceed the BAAQMD threshold of 54 pounds per day. All other emissions would be below the BAAQMD thresholds. Mitigation Measure 4.2-1b (see below) from the PEIR requires implementation of the BAAQMD's "additional construction mitigation measures" which includes requirements for reductions of NO_X and exhaust PM and implementation of best available control technology for reduction of heavy-duty diesel engine emissions.

To meet the requirements of the PEIR Mitigation Measure 4.2-1b, modeling assumptions included use of off-road equipment on the project site with diesel engines with 50 or more HP to be USEPA Tier 4 certified or be retrofitted with equivalent CARB approved emissions reduction systems. Table 9, *Mitigated Maximum Daily Construction Emissions*, shows the mitigated construction emissions for Phase 1 and Phase 2 with implementation of Tier 4 equipment, as well as fugitive dust reduction required by the PEIR Mitigation Measure 4.2-1a, specifically watering all exposed areas a minimum of twice per day and enforcing a 15-mph speed limit on all unpaved surfaces.

Table 9
MITIGATED MAXIMUM DAILY CONSTRUCTION EMISSIONS (POUNDS PER DAY)

Construction Activity	ROG	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Phase 1 and 2 Demolition	1.5	18.7	49.3	0.1	9.8	0.3	1.7	0.3
Phase 1 and 2 Grading	2.2	22.7	69.4	0.2	10.2	0.4	3.8	0.4
Phase 1 and 2 Underground Utilities	0.7	3.2	25.3	0.0	0.2	0.1	0.1	0.1
Phase 1 and 2 Paving	2.1	6.3	29.9	0.1	0.7	0.1	0.2	0.1
Phase 1 Building Construction	3.6	19.5	91.7	0.2	3.7	0.4	1.0	0.4
Phase 1 Architectural Coating	28.0	0.3	3.5	0.0	0.6	0.0	0.2	0.0
Phase 2 Building Construction	2.7	16.7	84.6	0.1	1.2	0.4	0.3	0.4
Phase 2 Architectural Coatings	14.3	0.2	2.3	0.0	0.2	0.0	0.1	0.0
Concurrent Activities								
2022 Building Construction + Underground Utilities	4.3	22.8	117.0	0.2	4.0	0.5	1.1	0.5
2023 Building Construction + Paving	7.3	40.2	183.8	0.4	7.5	0.9	2.0	0.9
2024 Phase 1 Building Construction + Phase 1 Architectural Coating	30.0	6.6	33.4	0.1	1.3	0.1	0.3	0.1
2024 Phase 2 Building Construction + Phase 2 Architectural Coating	17.0	16.9	87.0	0.2	1.4	0.4	0.4	0.4
Maximum Daily Emissions	**30.0**	**40.2**	**183.8**	**0.4**	**7.5**	**0.9**	**2.0**	**0.9**
BAAQMD Thresholds	*54*	*54*	*none*	*none*	*BMPs*	*84*	*BMPs*	*54*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A).

As shown in Table 9, with implementation of the PEIR Mitigation Measures 4.2-1a and 4.2-1b, the project's construction period emissions of criteria pollutant and precursors would not exceed the BAAQMD thresholds. The impact related to emissions of criteria pollutants and precursors during project construction activities would be less than significant with mitigation incorporated and would not exceed the significance determination in the PEIR.

Construction Diesel Particulate Matter Emissions

Implementation of the project would result in the use of heavy-duty construction equipment, haul trucks, on-site generators, and construction worker vehicles. These vehicles and equipment could generate the TAC DPM. Generation of DPM from construction projects typically occurs in a localized area (e.g., at the project site) for a short period of time. Because construction activities and subsequent emissions vary depending on the phase of construction (e.g., grading, building construction), the construction-related emissions to which nearby receptors are exposed to would also vary throughout the construction period. Concentrations of mobile-source DPM emissions are typically reduced by 70 percent at approximately 500 feet (CARB 2005).

The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has with the substance; a longer exposure period to a fixed amount of emissions would result in

higher health risks. Current models and methodologies for conducting cancer health risk assessments are associated with longer-term exposure periods (typically 30 years for individual residents based on guidance from OEHHA) and are best suited for evaluation of long duration TAC emissions with predictable schedules and locations. These assessment models and methodologies do not correlate well with the temporary and highly variable nature of construction activities. Cancer potency factors are based on animal lifetime studies or worker studies where there is long-term exposure to the carcinogenic agent. There is considerable uncertainty in trying to evaluate the cancer risk from projects that will only last a small fraction of a lifetime (Office of Environmental Health Hazard Assessment [OEHHA] 2015).

In addition, with implementation of Bayside Newark TOD PEIR Mitigation Measure 4.2-1b, the project would be required to use USEPA certified Tier 4 (or equivalent) off road construction equipment. Tier 4 engines are required to have systems which reduce DPM emissions by approximately 90 percent compared to non-certified engines (40 CFR Part 1039). Considering this information, the highly dispersive nature of DPM, and the fact that construction activities would occur at various locations throughout the project site, it is not anticipated that construction of the project would expose sensitive receptors to substantial DPM concentrations. The impact would be less than significant with mitigation incorporated and would not exceed the significance determination in the PEIR.

Mitigation Measures

Mitigation measures 4.2-1a and 4.2-1b from the PEIR would be required for the project.

Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-1a

Prior to issuance of any Grading Permit, the Public Works Director and the Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with the BAAQMD CEQA Air Quality Guidelines, the following basic construction mitigation measures shall be implemented for all construction projects:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.

- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.

- A publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints shall be posted. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Bayside Newark TOD Specific Plan PEIR Mitigation Measure 4.2-1b

Prior to issuance of any Grading Permit, the Public Works Director and the Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that, in compliance with the BAAQMD CEQA Air Quality Guidelines, the following additional construction mitigation measures shall be implemented for all construction projects:

- All exposed surfaces shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples or moisture probe.

- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 mph.

- Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction. Wind breaks should have at maximum 50 percent air porosity.

- Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.

- The simultaneous occurrence of excavation, grading, and ground disturbing construction activities on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surface at any one time.

- All trucks and equipment, including their tires, shall be washed off prior to leaving the site.

- Site accesses to a distance of 100 feet from the paved road shall be treated with a 6 to 12-inch compacted layer of wood chips, mulch, or gravel.

- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.

- Minimizing the idling time of diesel-powered construction equipment to two minutes.

- The project shall develop a plan demonstrating that the off-road equipment (more than 50 hp) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average 20 percent NO_X reduction and

45 percent PM reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.

- Use low VOC (i.e., ROG) coatings beyond the local requirements (i.e., Regulation 8, Rule 3: Architectural Coatings).

- Requiring that all construction equipment, diesel trucks, and generators be equipped with Best Available Control Technology for emission reductions of NO_X and PM.[2]

- Requiring all contractors use equipment that meets CARB's most recent certification standard for off-road heavy-duty diesel engines.[3]

2.5.2 PEIR Impact 4.2-2

Long-term operation of the proposed project would not result in significant air pollutant emissions (significance thresholds 2, 4, and 5).

2.5.2.1 Long-Term Operational Emissions Conclusions in the PEIR

The PEIR concluded that the BAAQMD criteria for the significance of a plan's operational direct and indirect emissions impacts are based on the plan's consistency with the current air quality plan control measures and whether the plan's rate of increase in vehicle miles traveled (or vehicle trips) is equal to or lower than the rate of increase in projected population. Consistency with the current air quality plan is discussed in Impact 4.2-3, and the impact was determined to be less than significant.

2.5.2.2 Project-Specific Long-Term Operational Emissions Analysis

The project's long-term operational emissions were estimated using CalEEMod as described in Section 2.3. The results of the modeling of the project's operational emissions of criteria pollutants and precursors for Phases 1 and 2 are shown in Table 10, *Maximum Daily Operational Emissions*, and Table 11, *Annual Operational Emissions*. The data are presented as the maximum anticipated daily emissions and annual operational emissions for the first full year of operation (2025) for comparison with the BAAQMD thresholds. The complete CalEEMod output is provided in Appendix A to this report.

[2] To meet the requirements of Mitigation Measure 4.2-1b for reduced diesel engine emissions, Best Available Control Technology, and CARB certification standards for off-road heavy-duty diesel engines, all off-road diesel-powered equipment with 50 or more hp shall be USEPA Tier 4 certified or be retrofitted with CARB approved equivalent diesel exhaust emissions reduction devices.

[3] See footnote above.

Table 10
MAXIMUM DAILY OPERATIONAL EMISSIONS (POUNDS PER DAY)

Source Category	ROG	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Phase 1								
Area	14.0	0.3	29.0	<0.1	-	0.2	-	0.2
Energy	0.2	1.5	0.7	<0.1	-	0.1	-	0.1
Mobile	3.6	4.5	37.4	<0.1	8.9	<0.1	2.4	<0.1
Phase 1 Subtotal[1]	**17.9**	**6.8**	**66.5**	**<0.1**	**8.9**	**0.3**	**2.4**	**0.3**
Phase 2								
Area	1.3	<0.1	2.1	<0.1	-	<0.1	-	<0.1
Energy	<0.1	0.1	<0.1	<0.1	-	<0.1	-	<0.1
Mobile	0.3	0.4	2.7	<0.1	0.6	<0.1	0.2	<0.1
Phase 2 Subtotal[1]	**1.6**	**0.5**	**4.9**	**<0.1**	**0.6**	**<0.1**	**0.2**	**<0.1**
Operational Total[1]	**19.4**	**7.4**	**71.4**	**<0.1**	**9.5**	**0.4**	**2.5**	**0.4**
BAAQMD Thresholds	*54*	*54*	*none*	*none*	*none*	*84*	*none*	*54*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A).
[1] Total may not sum due to rounding.

Table 11
ANNUAL OPERATIONAL EMISSIONS (TONS PER YEAR)

Source Category	ROG	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Phase 1								
Area	2.5	<0.1	2.6	<0.1	-	<0.1	-	<0.1
Energy	<0.1	0.3	0.1	<0.1	-	<0.1	-	<0.1
Mobile	0.7	0.9	6.4	<0.1	1.6	<0.1	0.4	<0.1
Phase 1 Subtotal[1]	**3.2**	**1.2**	**9.0**	**<0.1**	**1.6**	**<0.1**	**0.4**	**<0.1**
Phase 2								
Area	0.2	<0.1	0.2	<0.1	-	<0.1	-	<0.1
Energy	<0.1	<0.1	<0.1	<0.1	-	<0.1	-	<0.1
Mobile	<0.1	<0.1	0.5	<0.1	0.1	<0.1	<0.1	<0.1
Phase 2 Subtotal[1]	**0.3**	**<0.1**	**0.7**	**<0.1**	**0.1**	**<0.1**	**<0.1**	**<0.1**
Operational Total[1]	**3.4**	**1.3**	**9.7**	**<0.1**	**1.7**	**<0.1**	**0.4**	**<0.1**
BAAQMD Thresholds	*10*	*10*	*none*	*none*	*none*	*15*	*none*	*10*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A).
[1] Total may not sum due to rounding.

Because Phase 1 could become operational during building construction for Phase 2, the concurrent maximum daily emissions from Phase 2 building construction and architectural coating and Phase 1 operation are presented in Table 12, Concurrent Daily Emissions, and compared to the BAAQMD thresholds.

Table 12
2024 CONCURRENT DAILY EMISSIONS (POUNDS PER DAY)

Source Category	ROG	NO_X	CO	SO_X	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Phase 2 Mitigated Building Construction	2.7	16.7	84.6	<0.1	1.2	0.4	0.3	0.4
Phase 2 Mitigated Architectural Coating	14.3	0.2	2.3	<0.1	0.2	<0.1	0.1	<0.1
Phase 1 Operational	17.9	6.8	66.5	<0.1	8.9	0.3	2.4	0.3
Total[1]	**34.9**	**23.5**	**151.3**	**<0.1**	**10.3**	**0.7**	**2.8**	**0.7**
BAAQMD Thresholds	*54*	*54*	*none*	*none*	*none*	*84*	*none*	*54*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod (output data is provided in Appendix A).
[1] Total may not sum due to rounding.

As shown in Tables 10, 11, and 12, the maximum daily and annual operational criteria pollutant and precursors emissions, and the concurrent daily emissions would not exceed the BAAQMD thresholds. The impact related to emissions of criteria pollutants and precursors during long term operation of the project would be less than significant and would not exceed the significance determination in the PEIR.

Mitigation Measures

No mitigation measures are required.

2.5.2.3 Localized Carbon Monoxide Impact Conclusions in the PEIR

The PEIR concluded that the project would not cause traffic volumes at local intersections to increase beyond 6,000 vehicles per hour, below the BAAQMD CO hotspot screening guideline of 44,000 vehicles per hour, or 24,000 vehicles per hour for intersections with limited mixing zones.

2.5.2.4 Project-Specific Localized Carbon Monoxide Impact Analysis

Vehicle exhaust is the primary source of CO. In an urban setting, the highest CO concentrations are generally found in close proximity to congested intersections. Under typical meteorological conditions, CO concentrations tend to decrease as distance from the emissions source (i.e., congested intersection) increase. Project-generated traffic has the potential of contributing to localized "hot spots" of CO off-site. Because CO is a byproduct of incomplete combustion, exhaust emissions are worse when fossil-fueled vehicles are operated inefficiently, such as in stop-and-go traffic or through heavily congested intersections. Because CO disperses rapidly, hotpots are most likely to occur in areas with limited vertical mixing such as tunnels, long underpasses, or below-grade roadways. The BAAQMD CEQA guidelines provide that, if a project is consistent with the applicable congestion management plan and would not increase traffic volumes at intersections to more than 44,000 vehicles per hour for regular intersections, or would not increase traffic volumes at intersections to more than 24,000 vehicles per hour for intersections with limited vertical mixing zones, the impacts from CO hotpots would be less than significant (BAAQMD 2017a).

The project trip generation analysis concluded that the project would generate approximately 1,824 daily trips external to the Specific Plan area (Fehr & Peers 2021). These project-related trips would not result in hourly intersection traffic volumes above the 6,000 vehicles per hour analyzed in the PEIR

and would not result in intersections with more than 44,000 vehicles per hour, or 24,000 vehicles per hour for intersections with limited mixing zones. Impacts related to CO hotspots would be less than significant and would not exceed the significance determination in the PEIR.

Mitigation Measures

No mitigation measures are required.

2.5.2.5 Exposure of Project Residents to TACs Conclusions in the PEIR

The PEIR concluded that impacts on new sensitive receptors sited by the project from existing permitted TAC sources would be less than significant. However, the PEIR concluded that sensitive receptors within the plan area in proximity to the future Dumbarton Rail Corridor and Transit Station could be exposed to significant levels of DPM from trains. Mitigation Measure 4.2-2 requires a health risk analysis for new residences located with 1,000 feet of the proposed Transit Station, and appropriate filtered air supply systems for any new residences determined to have health risks above the BAAQMD thresholds.

2.5.2.6 Project-Specific Exposure of Project Residents to TACs Analysis

In accordance with the PEIR Mitigation Measure 4.2-2, a project specific HRA was completed as described in Section 2.3.3. The incremental excess cancer risk is an estimate of the chance a person exposed to a specific source of a TAC may have of developing cancer from that exposure beyond the individual's risk of developing cancer from existing background levels of TACs in the ambient air. For context, the average cancer risk from TACs in the ambient air for an individual living in an urban area of California is 830 in 1 million (CARB 2015). Cancer risk estimates do not mean, and should not be interpreted to mean, that a person will develop cancer from estimated exposures to toxic air pollutants.

The potential health risks to future project residents from exposure to DPM emissions from potential future trains on the Dumbarton Corridor right-of-way in Section 2.3, above. The resulting highest predicted incremental increased cancer risk for the residential building closest to the proposed Transit Station and railroad tracks buildings is shown in Table 13, *Project Residential Increased Incremental Cancer Risk from Train DPM*, see Figure 4 for receptor locations. As shown in Table 13, the highest estimated incremental increase in cancer risk to future project residents from train DPM emissions would be 1.3 in 1 million for Scenario 1 (six daily commuter trains per day). The highest estimated incremental increase in cancer risk for Scenario 2 (25 DMU trains per day) would be 0.6 in 1 million. These estimated increases in risk would be below the BAAQMD threshold of 10 in 1 million. The estimated risk assumes an individual standing and breathing outside the residential building every day between 17 and 21 hours per day for 30 years. The risk estimate does not account for future reductions of DPM emissions from commuter trains as more stringent USEPA diesel locomotive engine emissions standards take effect and older locomotives are retired. The risk estimate also does not account for the likelihood that any future passenger rail service on the Dumbarton Rail Corridor would utilize electric powered trains, consistent with the electrification program in progress on the Caltrain lines from San Jose to San Francisco. Therefore, new sensitive receptors sited by the project would not be exposed to substantial concentrations of DPM from trains, and no mitigation would be required for future project residences. The impact would be less than significant and would not exceed the significance determination in the PEIR.

Table 13
PROJECT RESIDENTIAL INCREASED INCREMENTAL CANCER RISK FROM TRAIN DPM

Receptor ID	Increased Cancer Risk 6 Commuter Trains	Increased Cancer Risk 25 DMU Trains
R1	1.2 in 1 million	0.6 in 1 million
R2	1.3 in 1 million	0.6 in 1 million
R3	1.2 in 1 million	0.6 in 1 million
R4	1.1 in 1 million	0.6 in 1 million
R5	1.1 in 1 million	0.6 in 1 million
R6	1.1 in 1 million	0.6 in 1 million
R7	1.1 in 1 million	0.6 in 1 million
R8	1.0 in 1 million	0.6 in 1 million
R9	1.0 in 1 million	0.6 in 1 million
R10	1.1 in 1 million	0.6 in 1 million
R11	0.6 in 1 million	0.3 in 1 million
BAAQMD Risk Threshold	**10 in 1 million**	**10 in 1 million**
Exceed Threshold?	*No*	*No*

Source: AERMOD and HARP ADMRT, modeling data is provided in Appendix B.
Notes: Totals may not sum due to rounding.
MT = metric ton; CO_2e = carbon dioxide equivalent.

A bus stop would be located in the transit station north of the PA1 mixed-use building (see Figure 3). The closest project residence to the proposed bus stop would be approximately 50 feet south on floors 2 through 6 of the PA1 mixed use building. The details of future bus service and schedules serving the transit station were not known at the time of this analysis. Future bus service would be provided by Alameda County Transit (AC Transit), which primarily operates diesel-powered buses. All on-road diesel engines sold in the US since 2015 are required to be USPEA Tier 4 certified. Tier 4 certified engines are required to have DPM emissions 90 percent lower than non-certified engines (40 CFR Part 1039). According to AC Transit, all of their older diesel-powered buses have been retrofitted with filter systems which reduce DPM by 85 percent (AC Transit 2020a). Future bus service to the transit station would likely comprise the closest two existing bus routes (lines 200 and 251) which provide a combined 48 buses per day and up to 3 buses per hour (AC Transit 2020b). Each bus would only be in the project vicinity (driving on Hickory Street or idling at the bus stop) for a few minutes. The dose (of TAC) to which receptors are exposed is the primary factor used to determine health risk. Considering the limited number of buses per hour, the short duration buses would be in the project vicinity and the reduced DPM emissions of the AC Transit bus fleet, new sensitive receptors sited by the project would not be exposed to substantial concentrations of DPM from buses, and no mitigation would be required for future project residences. The impact would be less than significant and would not exceed the significance determination in the PEIR.

Mitigation Measures

An HRA was completed in accordance with the PEIR Mitigation Measure 4.2-2. Because the health risks to future project residents from train emissions would be less than significant, residential air filtration systems specified in the mitigation measure would not be necessary.

2.5.2.7 Objectional Odors Conclusions in the PEIR

The PEIR concluded that the proposed project would not be located in proximity to any facilities that are typically associated with odor complaints, as identified by the BAAQMD, and the impacts would be less than significant.

2.5.2.8 Project-Specific Objectional Odors Analysis

Construction (Short-Term) Emissions

Construction of the project would require the use of diesel-powered equipment, and the application of asphalt and paint, all of which can be a temporary source of odors. Due to the temporary and intermittent nature of construction activities, and due to the distance to the nearest sensitive receptors (single-family homes approximately 190 feet southeast), construction of the project would not result in emissions leading to odors that would adversely affect substantial numbers of people. The impact would be less than significant and would not exceed the significance of the impact in the PEIR.

Operation (Long-Term) Emissions

Long-term operation of the project would not be a substantial source of odors, nor would the project exacerbate existing odors from tidal wetlands. Therefore, long-term operation of the project would not result in emissions leading to odors that would adversely affect substantial number of people, and the impact would be less than significant and would not exceed the significance of the impact in the PEIR.

Mitigation Measures

No mitigation measures are required.

2.5.3 PEIR Impact 4.2-3

Development associated with the proposed project would be consistent with regional plans (significance threshold 1).

2.5.3.1 Consistency with Air Quality Plans Conclusions in the PEIR

The PEIR concluded that the Specific Plan would be consistent with the control measures in the BAAQMD 2010 Clean Air Plan, and the impact would be less than significant. No mitigation measures were required.

2.5.3.2 Project-Specific Consistency with Air Quality Plans Analysis

Consistency with the air quality plan is determined by whether the project would hinder implementation of control measures identified in the air quality plan or would result in growth of population or employment that is not accounted for in local and regional planning. The BAAQMD's Clean Air Plan is the applicable air quality plan for the SFBAAB and the City. Since the PEIR was certified in 2010, the BAAQMD's 2010 Clean Air Plan was superseded by the 2017 Clean Air Plan, adopted on April 19, 2017 (BAAQMD 2017c).

Implementation of the project would result in the construction of 370 residential units, approximately 4,000 SF of retail space, and the Grand Park. The City of Newark zoning designation is BTP for the project site, which is inconsistent with the proposed land uses for the project. Therefore, an amendment to the zoning map is required to rezone the project site to allow for medium density residential-form based code (MDR-FBC), commercial mixed use-form based code (CMU-FBC), transit station (TS), Public Facilities (PF), and Park (PK).

The Specific Plan allows for an adjustment of land uses within the Specific Plan area without necessitating a Specific Plan Amendment as long as the net increase does not exceed the total dwelling units permitted by the Specific Plan (2,500 units). As of November 2021, a total of 2,171 dwelling units have been approved or are pending approval in the Specific Plan area, including the proposed FMC Willow and Grand Park project. The project's mixed-use development and location is consistent with the Specific Plan's intent for TOD and the project site's regional designation as a Priority Development Area. Therefore, the project would be consistent with the local and regional growth assumptions used in developing the 2017 Clean Air Plan.

As described in the 2017 Clean Air Plan, the 2010 TCMs were carried forward into the 2017 Clean Air Plan, although the measure descriptions and numbering were updated. In addition, 8 of the 10 Mobile Source Measures (MSMs), all 6 of the Land Use Measures (LUMs), and all 4 Energy and Climate Measures (ECMS) from 2010 were carried forward into the 2017 plan (BAAQMD 2017c). The MSMs primarily address vehicles and their components as they relate to emissions and are not directly applicable to the project. The project would be required to comply with the building energy efficiency standards of 2019 Title 24 part 6, including the requirement for new residential building to install on-site photovoltaic (solar) electricity generation systems, and Title 24 part 11 (CALGreen). The Title 24, part 6 residential solar requirement is discussed further in Section 3.0, *Greenhouse Gas Emissions*, below. Therefore, the project would not conflict with or obstruct implementation of the 2017 Clean Air Plan and the impact would be less than significant and would not exceed the significance of the impact in the PEIR.

Mitigation Measures

No mitigation measures are required.

2.5.4 PEIR Impact 4.2-4

Implementation of the proposed project and related cumulative projects would not result in significant air quality impacts (significance threshold 2).

2.5.4.1 Cumulative Air Quality Impact Conclusions in the PEIR

The PEIR concluded that consistency with the 2010 Clean Air Plan control measures would ensure that the Specific Plan would not cumulatively contribute to air quality impacts in the SFBAAB, and the impacts would be less than significant.

2.5.4.2 Project-Specific Cumulative Air Quality Impact Analysis

In developing project-level thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable,

resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary (BAAQMD 2017b). As discussed in Impact 4.2-1 and 4.2-2, the project's short-term construction emissions and long-term operational emissions would not exceed the BAAQMD threshold with mitigation incorporated. Therefore, the project's emissions of criteria pollutants and precursors would be less than cumulatively considerable. The impact would be less than significant and would not exceed the significance of the impact in the PEIR.

3.0 GREENHOUSE GAS EMISSIONS

3.1 GHG SETTING

3.1.1 Climate Change Overview

Global climate change refers to changes in average climatic conditions over the entire Earth including temperature, wind patterns, precipitation, and storms. Global temperatures are moderated by naturally occurring atmospheric gases. These gases are commonly referred to as GHGs because they function like a greenhouse by letting light in but preventing heat from escaping, thus warming the Earth's atmosphere. These gases allow solar radiation (sunlight) into the Earth's atmosphere but prevent radiative heat from escaping, thus warming the Earth's atmosphere.

GHGs are emitted by natural processes and human (anthropogenic) activities. Anthropogenic GHG emissions are primarily associated with (1) the burning of fossil fuels during motorized transport, electricity generation, natural gas consumption, industrial activity, manufacturing, and other activities; (2) deforestation; (3) agricultural activity; and (4) solid waste decomposition.

The temperature record shows a decades-long trend of warming, with 2016 global surface temperatures ranking as the warmest year on record since 1880. The newest release in long-term warming trends announced 2020 ranked as tied with 2016 for the warmest year on record with an increase of 1.84 degrees Fahrenheit compared to the 1951-1980 average (National Aeronautics and Space Administration [NASA] 2021). GHG emissions from human activities are the most significant driver of observed climate change since the mid-20th century (United Nations Intergovernmental Panel on Climate Change [IPCC] 2013). The IPCC constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. The statistical models show a "high confidence" that temperature increase caused by anthropogenic GHG emissions could be kept to less than two degrees Celsius relative to pre-industrial levels if atmospheric concentrations are stabilized at about 450 parts per million (ppm) carbon dioxide equivalent (CO_2e) by the year 2100 (IPCC 2014).

3.1.2 Greenhouse Gases

The GHGs defined under California's Assembly Bill (AB) 32 include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6).

Carbon Dioxide. CO_2 is the most important and common anthropogenic GHG. CO_2 is an odorless, colorless GHG. Natural sources include the decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungi; evaporation from oceans; and volcanic outgassing. Anthropogenic sources of CO_2 include burning fuels, such as coal, oil, natural gas, and wood. Data from ice cores

indicate that CO_2 concentrations remained steady prior to the current period for approximately 10,000 years. The atmospheric CO_2 concentration in 2010 was 390 ppm, 39 percent above the concentration at the start of the Industrial Revolution (about 280 ppm in 1750). In February 2021, the CO_2 concentration was 416 ppm, a 48 percent increase since 1750 (National Oceanic and Atmospheric Administration [NOAA] 2021).

Methane. CH_4 is the main component of natural gas used in homes. A natural source of methane is from the decay of organic matter. Geological deposits known as natural gas fields contain methane, which is extracted for fuel. Other sources are from decay of organic material in landfills, fermentation of manure, and cattle digestion.

Nitrous Oxide. N_2O is produced by both natural and human-related sources. N_2O is emitted during agricultural and industrial activities, as well as during the combustion of fossil fuels and solid waste. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic (fatty) acid production, and nitric acid production.

Hydrofluorocarbons. Fluorocarbons are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. Chlorofluorocarbons are nontoxic, nonflammable, insoluble, and chemically nonreactive in the troposphere (the level of air at Earth's surface). Chlorofluorocarbons were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone; therefore, their production was stopped as required by the 1989 Montreal Protocol.

Sulfur Hexafluoride. SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.

GHGs have long atmospheric lifetimes that range from one year to several thousand years. Long atmospheric lifetimes allow for GHG emissions to disperse around the globe. Because GHG emissions vary widely in the power of their climatic effects, climate scientists have established a unit called global warming potential (GWP). The GWP of a gas is a measure of both potency and lifespan in the atmosphere as compared to CO_2. For example, because methane and N_2O are approximately 25 and 298 times more powerful than CO_2, respectively, in their ability to trap heat in the atmosphere, they have GWPs of 25 and 298, respectively (CO_2 has a GWP of 1). CO_2e is a quantity that enables all GHG emissions to be considered as a group despite their varying GWP. The GWP of each GHG is multiplied by the prevalence of that gas to produce CO_2e.

Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). In 2007, IPCC updated the GWP values based on the latest science at the time in its Fourth Assessment Report (AR4). The updated GWPs in the IPCC AR4 have begun to be used in recent GHG emissions inventories. In 2013, IPCC again updated the GWP values based on the latest science in its Fifth Assessment Report (AR5) (IPCC 2013). However, United Nations Framework Convention on Climate Change (UNFCCC) reporting guidelines for national inventories require the use of GWP values from the AR4. To comply with international reporting standards under the UNFCCC, official emission estimates for California and the U.S. are reported using AR4 GWP values. Therefore, statewide and national GHG inventories have not yet updated their GWP values to the AR5 values. By applying the GWP ratios, project related CO_2e emissions can be tabulated in metric tons per year. Typically, the GWP

ratio corresponding to the warming potential of CO_2 over a 100-year period is used as a baseline. The atmospheric lifetime and GWP of selected GHGs are summarized in Table 14, *Global Warming Potentials and Atmospheric Lifetimes*.

Table 14
GLOBAL WARMING POTENTIALS AND ATMOSPHERIC LIFETIMES

Greenhouse Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50-200	1
Methane (CH_4)	12	25
Nitrous Oxide (N_2O)	114	298
HFC-324a	14	1,430
PFC: Tetrafluoromethane (CF_4)	50,000	7,390
PFC: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

Source: IPCC 2007
HFC: hydrofluorocarbon; PFC: perfluorocarbon

3.2 GHG REGULATORY FRAMEWORK

All levels of government have some responsibility for the protection of air quality, and each level (federal, State, and regional/local) has specific responsibilities relating to air quality regulation. GHG emissions and the regulation of GHGs is a relatively new component of air quality.

3.2.1 Federal GHG Regulations

3.2.1.1 Federal Clean Air Act

The U.S. Supreme Court ruled on April 2, 2007, in *Massachusetts v. U.S. Environmental Protection Agency* (USEPA*)* that CO_2 is an air pollutant, as defined under the CAA, and that the USEPA has the authority to regulate emissions of GHGs. The USEPA announced that GHGs (including CO_2, CH_4, N_2O, HFC, PFC, and SF_6) threaten the public health and welfare of the American people. This action was a prerequisite to finalizing the USEPA's GHG emissions standards for light-duty vehicles, which were jointly proposed by the USEPA and the United States Department of Transportation's National Highway Traffic Safety Administration (NHTSA). The standards were established on April 1, 2010 for 2012 through 2016 model year vehicles and on October 15, 2012 for 2017 through 2025 model year vehicles (USEPA 2017; USEPA and NHTSA 2012).

3.2.1.2 Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards

The USEPA and the NHTSA worked together on developing a national program of regulations to reduce GHG emissions and to improve fuel economy of light-duty vehicles. The USEPA established the first-ever national GHG emissions standards under the CAA, and the NHTSA established CAFE standards under the Energy Policy and Conservation Act. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025. On August 2, 2018, the agencies released a notice of proposed rulemaking—the Safer

Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). The purpose of the SAFE Vehicles Rule is "to correct the national automobile fuel economy and greenhouse gas emissions standards to give the American people greater access to safer, more affordable vehicles that are cleaner for the environment." The direct effect of the rule is to eliminate the standards that were put in place to gradually raise average fuel economy for passenger cars and light trucks under test conditions from 37 miles per gallon (mpg) in 2020 to 50 mpg in 2025. The new SAFE Vehicles Rule freezes the average fuel economy level standards indefinitely at the 2020 levels. The new SAFE Vehicles Rule also results in the withdraw of the waiver previously provided to California for that State's GHG and zero emissions vehicle (ZEV) programs under Section 209 of the CAA.

3.2.2 California GHG Regulations

There are numerous State plans, policies, regulations, and laws related to GHG emissions and global climate change. Following is a discussion of some of these plans, policies, and regulations that (1) establish overall State policies and GHG emission reduction targets; (2) require State or local actions that result in direct or indirect GHG emission reductions for the proposed project; and (3) require CEQA analysis of GHG emissions.

3.2.2.1 California Energy Code

The CCR Title 24 Part 6, California's Energy Efficiency Standards for Residential and Nonresidential Buildings are described in Section 2.1, above.

3.2.2.2 California Green Building Standards Code

The California Green Building Standards Code (CALGreen; CCR Title 24, Part 11) is a code with mandatory requirements for new residential and nonresidential buildings (including industrial buildings) throughout California. The code is Part 11 of the California Building Standards Code in Title 24 of the CCR (CBSC 2017). The current 2019 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings went into effect on January 1, 2020.

The development of CALGreen is intended to (1) cause a reduction in GHG emissions from buildings; (2) promote environmentally responsible, cost-effective, healthier places to live and work; (3) reduce energy and water consumption; and (4) respond to the directives by the Governor. In short, the code is established to reduce construction waste; make buildings more efficient in the use of materials and energy; and reduce environmental impact during and after construction.

CALGreen contains requirements for storm water control during construction; construction waste reduction; indoor water use reduction; material selection; natural resource conservation; site irrigation conservation; and more. The code provides for design options allowing the designer to determine how best to achieve compliance for a given site or building condition. The code also requires building commissioning, which is a process for the verification that all building systems, like heating and cooling equipment and lighting systems, are functioning at their maximum efficiency.

3.2.2.3 Executive Order S-3-05

On June 1, 2005, Executive Order (EO) S-3-05 proclaimed that California is vulnerable to climate change impacts. It declared that increased temperatures could reduce snowpack in the Sierra Nevada, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To avoid or reduce

climate change impacts, EO S-3-05 calls for a reduction in GHG emissions to the year 2000 level by 2010, to year 1990 levels by 2020, and to 80 percent below 1990 levels by 2050.

3.2.2.4 Assembly Bill 32 – Global Warming Solution Act of 2006

The California Global Warming Solutions Act of 2006, widely known as AB 32, requires that the CARB develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020. The bill requires CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG emission reductions.

3.2.2.5 Senate Bill 375

Senate Bill (SB) 375, the Sustainable Communities and Climate Protection Act of 2008, supports the State's climate action goals to reduce GHG emissions through coordinated transportation and land use planning with the goal of more sustainable communities.

Under the Sustainable Communities Act, CARB sets regional targets for GHG emissions reductions from passenger vehicle use. In 2010, CARB established these targets for 2020 and 2035 for each region covered by one of the State's metropolitan planning organizations (MPOs). CARB periodically reviews and updates the targets, as needed.

Each of California's MPOs must prepare a Sustainable Communities Strategy (SCS) as an integral part of its regional transportation plan (RTP). The SCS contains land use, housing, and transportation strategies that, if implemented, would allow the region to meet its GHG emission reduction targets. Once adopted by the MPO, the RTP/SCS guides the transportation policies and investments for the region. CARB must review the adopted SCS to confirm and accept the MPO's determination that the SCS, if implemented, would meet the regional GHG targets. If the combination of measures in the SCS would not meet the regional targets, the MPO must prepare a separate alternative planning strategy (APS) to meet the targets. The APS is not a part of the RTP. Qualified projects consistent with an approved SCS or Alternative Planning Strategy categorized as "transit priority projects" would receive incentives to streamline CEQA processing.

3.2.2.6 Senate Bill 743

On September 27, 2013, California Governor Jerry Brown signed SB 743 into law and started a process that changes transportation impact analysis as part of CEQA compliance. These changes include the elimination of auto delay, level of service (LOS), and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts for land use projects and plans in California. Further, parking impacts will not be considered significant impacts on the environment for select development projects within infill areas with nearby frequent transit service. According to the legislative intent contained in SB 743, these changes to current practice were necessary to appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions.

3.2.2.7 Senate Bill 97

SB 97 required the Governor's Office of Planning and Research to develop recommended amendments to the State CEQA Guidelines for addressing GHG emissions, including the effects associated with transportation and energy consumption. The amendments became effective on March 18, 2010.

3.2.2.8 Executive Order B-30-15

On April 29, 2015, EO B-30-15 established a California GHG emission reduction target of 40 percent below 1990 levels by 2030. The EO aligns California's GHG emission reduction targets with those of leading international governments, including the 28 nation European Union. California is on track to meet or exceed the target of reducing GHG emissions to 1990 levels by 2020, as established in AB 32. California's new emission reduction target of 40 percent below 1990 levels by 2030 will make it possible to reach the goal established by EO S-3-05 of reducing emissions 80 percent under 1990 levels by 2050.

3.2.2.9 Senate Bill 32 and Assembly Bill 197

As a follow-up to AB 32 and in response to EO-B-30-15, SB 32 was passed by the California legislature in August 2016 to codify the EO's California GHG emission reduction target of 40 percent below 1990 levels by 2030 and requires the State to invest in the communities most affected by climate change. AB 197 establishes a legislative committee on climate change policies to help continue the State's activities to reduce GHG emissions.

3.2.2.10 Assembly Bill 1493 – Vehicular Emissions of Greenhouse Gases

AB 1493 (Pavley) requires that CARB develop and adopt regulations that achieve "the maximum feasible reduction of GHGs emitted by passenger vehicles and light-duty truck and other vehicles determined by CARB to be vehicles whose primary use is noncommercial personal transportation in the State." On September 24, 2009, CARB adopted amendments to the Pavley regulations that intend to reduce GHG emissions in new passenger vehicles from 2009 through 2016. The amendments bind California's enforcement of AB 1493 (starting in 2009), while providing vehicle manufacturers with new compliance flexibility. The amendments also prepare California to merge its rules with the federal CAFE rules for passenger vehicles (CARB 2017a). In January 2012, CARB approved a new emissions-control program for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases and requirements for greater numbers of zero-emission vehicles into a single packet of standards called Advanced Clean Cars (CARB 2017a).

3.2.2.11 Assembly Bill 341

The State legislature enacted AB 341 (California Public Resource Code Section 42649.2), increasing the diversion target to 75 percent statewide. AB 341 requires all businesses and public entities that generate 4 cubic yards or more of waste per week to have a recycling program in place. The final regulation was approved by the Office of Administrative Law on May 7, 2012 and went into effect on July 1, 2012.

3.2.2.12 Executive Order S-01-07 – Low Carbon Fuel Standard

This EO, signed by Governor Schwarzenegger on January 18, 2007, directs that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by the year 2020. It orders that a Low Carbon Fuel Standard (LCFS) for transportation fuels be established

for California and directs CARB to determine whether a LCFS can be adopted as a discrete early action measure pursuant to AB 32. CARB approved the LCFS as a discrete early action item with a regulation adopted and implemented in April 2010. Although challenged in 2011, the Ninth Circuit reversed the District Court's opinion and rejected arguments that implementing LCFS violates the interstate commerce clause in September 2013. CARB is therefore continuing to implement the LCFS statewide.

3.2.2.13 Senate Bill 350

Approved by Governor Brown on October 7, 2015, SB 350 increases California's renewable electricity procurement goal from 33 percent by 2020 to 50 percent by 2030. This will increase the use of Renewables Portfolio Standard eligible resources, including solar, wind, biomass, and geothermal. In addition, large utilities are required to develop and submit Integrated Resource Plans to detail how each entity will meet their customers resource needs, reduce GHG emissions, and increase the use of clean energy.

3.2.2.14 Senate Bill 100

Approved by Governor Brown on September 10, 2018, SB 100 extends the renewable electricity procurement goals and requirements of SB 350. SB 100 requires that all retail sale of electricity to California end-use customers be procured from 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

3.2.2.15 California Air Resources Board: Climate Change Scoping Plan

On December 11, 2008, CARB adopted the Scoping Plan (CARB 2008) as directed by AB 32. The Scoping Plan proposes a set of actions designed to reduce overall GHG emissions in California to the levels required by AB 32. Measures applicable to development projects include those related to energy-efficiency building and appliance standards, the use of renewable sources for electricity generation, regional transportation targets, and green building strategy. Relative to transportation, the Scoping Plan includes nine measures or recommended actions related to reducing VMT and vehicle GHG emissions through fuel and efficiency measures. These measures would be implemented statewide rather than on a project-by-project basis.

In response to EO B-30-15 and SB 32, all state agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the Scoping Plan to reflect the 2030 target (CARB 2014). The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue driving down emissions. In December 2017, CARB adopted the *2017 Climate Change Scoping Plan Update, the Strategy for Achieving California's 2030 Greenhouse Gas Target,* to reflect the 2030 target set by EO B-30-15 and codified by SB 32 (CARB 2017b).

3.2.3 Regional GHG Policies and Plans

3.2.3.1 Bay Area Air Quality Management District

The BAAQMD provides direction and recommendations for the analysis of GHG impacts of a project and approach to mitigation measures in its CEQA Guidelines (BAAQMD 2017b). The guidance provided in the handbook was used to prepare this analysis.

3.2.3.2 Association of Bay Area Governments and Metropolitan Transportation Commission

As required by the Sustainable Communities and Climate Protection Act of 2008 (SB 375), ABAG and the MTC have developed a Regional Transportation Plan and SCS as a component of Plan Bay Area 2040 (MTC and ABAG 2017). This plan seeks to reduce GHG and other mobile source emissions through coordinated transportation and land use planning to reduce VMT.

3.2.4 Local Greenhouse Gas Plans

3.2.4.1 City of Newark

The City adopted a Climate Action Plan (CAP) Initial Framework in 2010. The CAP Initial Framework presents a summary of actions the City has already taken towards the reduction of GHG emissions; summarizes the 2005 emissions inventory; presents actions the City, residents and businesses can take to further reduce emissions; sets reduction goals; and describes a monitoring plan (City 2010).

The City General Plan Conservation and Sustainability element supports the CAP with goals, policies, and actions to reduce the City's contribution to climate change by encouraging TOD, increasing transportation options, and planning for rising sea levels. The General Plans goals and policies for building energy and water efficiency, and for conservation and management of the City's tree resources and urban forest also support the CAP and statewide GHG reduction goals (City 2013).

3.3 GHG EXISTING CONDITIONS

3.3.1 Worldwide and National GHG Inventory

In 2014, total GHG emissions worldwide were estimated at 48,892 million metric tons (MMT) of CO_2e emissions (World Resource Institute [WRI] 2020). The U.S. contributed the second largest portion (13 percent) of global GHG emissions in 2014. The total U.S. GHG emissions was 6,319 MMT CO_2e in 2019, of which 82 percent was CO_2 emission (WRI 2020). On a national level, approximately 27 percent of GHG emissions were associated with transportation and about 38 percent were associated with electricity generation (WRI 2020).

3.3.2 State GHG Inventories

The CARB performed statewide inventories for the years 1990 to 2017, as shown in Table 15, *California State Greenhouse Gas Emissions by Sector*. The inventory is divided into six broad sectors of economic activity: agriculture, commercial, electricity generation, industrial, residential, and transportation. Emissions are quantified in MMT CO_2e.

As shown in Table 15, statewide GHG source emissions totaled 431 MMT CO_2e in 1990, 471 MMT CO_2e in 2000, 449 MMT CO_2e in 2010, and 424 MMT CO_2e in 2017. Transportation-related emissions consistently contribute the most GHG emissions, followed by electricity generation and industrial emissions.

Table 15
CALIFORNIA GREENHOUSE GAS EMISSIONS BY SECTOR

Sector	Emissions (MMT CO_2e)			
	1990	2000	2010	2017
Agriculture and Forestry	18.9 (4%)	31.0 (7%)	33.7 (8%)	32.4 (8%)
Commercial	14.4 (3%)	14.1 (3%)	20.1 (4%)	23.3 (5%)
Electricity Generation	110.5 (26%)	105.4 (22%)	90.6 (20%)	62.6 (15%)
Industrial	105.3 (24%)	105.8 (22%)	101.8 (23%)	101.1 (24%)
Residential	29.7 (7%)	31.7 (7%)	32.1 (7%)	30.4 (7%)
Transportation	150.6 (35%)	183.2 (39%)	170.2 (38%)	174.3 (41%)
Unspecified Remaining	1.3 (<1%)	0.0 (0%)	0.0 (0%)	0.0 (0%)
TOTAL	**430.7**	**471.1**	**448.5**	**424.1**

Source: CARB 2007 and CARB 2019
MMT = million metric tons; CO_2e = carbon dioxide equivalent

3.3.3 Regional GHG Inventory

A San Francisco Bay Area regional emissions inventory for the year 2015 prepared by BAAQMD for the 2017 Clean Air Plan is presented in Table 16, *San Francisco Bay Area GHG Emissions by Sector* (BAAQMD 2017c). The sectors included in this inventory are somewhat different from those in the statewide inventory. Similar to the statewide emissions, transportation related GHG emissions contributed the most regionally.

Table 16
SAN FRANCISCO BAY AREA GHG EMISSIONS BY SECTOR

Sector	2015 Emissions MMT CO_2e (% total)[1]
Transportation	34.6 (41%)
Electricity	12.1 (14%)
Buildings	8.9 (11%)
Stationary Sources	22.0 (26%)
Waste Management	2.3 (3%)
Fluorinated Gases	3.6 (4%)
Agriculture	1.2 (1%)
TOTAL	**84.7**

Source: BAAQMD 2017c.
[1] Percentages may not total 100 due to rounding.
MMT = million metric tons; CO_2e = carbon dioxide equivalent

3.4 GHG METHODOLOGY

The project's GHG emissions were calculated using the CalEEMod, Version 2020.4.0, as described in Section 2.3, above.

3.4.1 Construction Emissions

Construction of the project would result in emissions of GHG from the use of diesel-powered equipment, from worker and vendor vehicles traveling to and from the project site, and from trucks

hauling debris and soil. The anticipated construction equipment required is described in Section 2.3, above. The number of worker and vendor trips is based on CalEEMod defaults for each constructing activity. During demolition, an export of approximately 12,680 tons of old concrete/asphalt is anticipated. During grading, an import of approximately 77,700 cubic yards of soil is anticipated.

3.4.2 Operational Emissions

3.4.2.1 Area Source Emissions

This CalEEMod module estimates the GHG emissions that would occur from the use of hearths (e.g., wood or gas fireplaces and wood stoves), and landscaping equipment. This module also estimates emissions due to use of consumer products and architectural coatings that have volatile organic compounds (VOCs); however, these sources do not emit GHGs. The project would not include wood burning fireplaces, woodstoves, or natural gas fireplaces.

The use of landscape equipment emits GHGs associated with the equipment's fuel combustion. CalEEMod estimates the number and type of equipment needed based on the number of summer days given the project's location as entered in the project characteristics module. The model defaults for landscaping equipment were assumed.

3.4.2.2 Vehicular (Mobile) Sources

Operational emissions from mobile source emissions are associated with vehicle trip generation and trip length. Based on the trip generation analysis, the project would generate 1,824 average daily trips (Fehr & Peers 2021). However, the trip generation analysis used older project data that assumed more residential units (377) and retail space (12,100 SF) than the proposed project. Trip generation rates used in the modeling were calculated from the trip generation data. The trip generation rates include trip reductions for internalization. Therefore, no pass-by or linked trip reductions were included in the modeling.

3.4.2.3 Energy Sources

GHGs are emitted as a result of activities in buildings for which electricity and natural gas are used as energy sources. GHGs are generated during the generation of electricity from fossil fuels off-site in power plants. These emissions are considered indirect and are calculated in CalEEMod as associated with a building's operation.

Energy source emissions were estimated assuming implementation of energy-reducing project design features to comply with the 2019 Title 24 standards which include a requirement for new residential buildings with three or fewer residential floors to have on-site generation of electricity through photovoltaic (solar) panels. The project's mixed-use affordable housing/commercial building and some of the townhome buildings have four or more residential floors and would not require solar panels. The project's remaining residential buildings (234 DU) total approximately 365,038 SF of conditioned space (total floor area minus garage area, as listed in the project floor plans) and would require solar panels producing a minimum of 436 kilowatts (kW).[4] The annual electricity generated by a rooftop mounted

[4] Per the 2019 Title 24 residential building energy efficiency requirements, the minimum solar electrical generation required is calculated by kW = (CFA x A)/1000 + (DU * B), where CFA is the conditioned floor area, A is 0.628 (climate zone 3 [Alameda County] adjustment factor), DU is the total number of dwelling units, and B is 1.12 (climate zone 3 dwelling unit factor).

solar power system varies by the climate, amount of sunlight available per day, the pitch and orientation of the roof, and the efficiency of the electrical transmission. Assuming a capacity factor (CF) of 20 percent, which accounts for climate, daylight hours, roof pitch and orientation, and transmission loss, the power produced by the project's solar panels would be approximately 860,799 kilowatt-hours (kWhr) per year.[5] The complete solar power requirement calculations are included with the CalEEMod output files in Appendix A to this report.

3.4.2.4 Solid Waste Sources

The disposal of solid waste produces GHG emissions from anaerobic decomposition in landfills, incineration, and transportation of waste. CalEEMod determines the GHG emissions associated with disposal of solid waste into landfills. Portions of these emissions are biogenic. CalEEMod methods for quantifying GHG emissions from solid waste are based on the IPCC method using the degradable organic content of waste. Existing land use GHG emissions associated with waste disposal were all calculated using CalEEMod's default parameters. A conservative 25 percent solid waste diversion rate was applied in CalEEMod to the new construction and redevelopment that would occur to account for mandatory compliance with AB 341 that is not included in the model defaults.

3.4.2.5 Water and Wastewater Sources

The amount of water used, and wastewater generated, by a project has indirect GHG emissions associated with it. These emissions are a result of the energy used to supply, distribute, and treat the water and wastewater. In addition to the indirect GHG emissions associated with energy use, wastewater treatment can directly emit both methane and nitrous oxide.

CalEEMod uses default electricity intensity values for various phases of supplying and treating water from CEC's *Refining Estimates of Water-Related Energy Use in California*. The model estimates water/wastewater emissions by multiplying the total projected water/wastewater demand by the applicable water electricity intensities and by the utility intensity GHG factors.

The default CalEEMod water use assumptions were used for the GHG emissions estimates for existing land uses and operation of the project. For the project's water and wastewater GHG emissions, an overall 20 percent reduction in water use was applied in the CalEEMod mitigation section to account for recent requirements of CALGreen.

3.5 GHG SIGNIFICANCE CRITERIA

Given the relatively small levels of emissions generated by a typical project in relationship to the total amount of GHG emissions generated on a national or global basis, individual development projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Thus, the potential for a significant GHG impact is limited to cumulative impacts.

[5] Solar kWhr per year can be calculated by: kWhr/year = Power Output (kW) x 24 hours/day x 365 days/year x CF, where CF is a capacity factor which accounts for climate, daylight hours, roof pitch and orientation, and transmission loss. For typical California residential systems, the CF can range between 17% and 22.5%. A CF of 20% was used in the project calculations.

Consistent with the significance thresholds included in the PEIR, a project would have a significant environmental impact if it would:

(1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or

(2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

The BAAQMD has adopted GHG thresholds of significance that a lead agency may use for determining the significance of a land use development project's GHG impacts. For development project, the BAAQMD recommends an efficiency threshold of 4.6 metric ton (MT) or carbon dioxide equivalents (CO_2e) per service population year for a project's long-term operational GHG emissions (BAAQMD 2017a).[6] The BAAQMD's GHG thresholds were developed to meet the year 2020 statewide GHG emissions targets as mandated by AB 32 and implemented by the CARB Scoping Plan. The BAAQMD has not adopted guidance or revised thresholds to account for GHG reduction target beyond 2020. Therefore, this analysis compares the project's emissions to a reduced threshold corresponding to the SB 32 reduction target of emissions 40 percent below 1990 levels by 2030. Accordingly, a threshold reduced by 4.98 percent for each year between 2020 and 2030 would meet the mandates of SB 32. The first full year of operation for the project is anticipated to be 2025. Therefore, a threshold 22.6 percent below the BAAQMD threshold of 4.6 MT CO_2e per service population per year (or 3.56 MT) is used in this analysis.

The BAAQMD has not adopted a threshold for determining the significance of a project's construction GHG emissions. However, the BAAQMD recommends quantification and disclosure of GHG emissions that would occur during construction.

Given the relatively small levels of emissions generated by a project in relationship to the total amount of GHG emissions generated on a national or global basis, individual projects are not expected to result in significant, direct impacts with respect to climate change. However, given the magnitude of the impact of GHG emissions on the global climate, GHG emissions from new development could result in significant, cumulative impacts with respect to climate change. Therefore, the significance of the project's GHG emission impacts are only evaluated cumulatively.

3.6 GHG IMPACT ANALYSIS

GHG emissions are discussed in Chapter 4.6 of the PEIR prepared for the Bayside Newark TOD Specific Plan (City 2011).

3.6.1 PEIR Impact 4.6-1

Greenhouse gas emissions generated by the project would not have a significant impact on the environment.

[6] Service population is the total number of residents living in an area plus the employees working in the same area.

3.6.1.1 GHG Emissions Conclusions in the PEIR

The PEIR concluded that the Specific Plan's contribution to regional GHG emissions would be potentially significant. PEIR Mitigation Measure 4.6-1 requires implementation of project design features to reduce building energy and transportation related GHG emissions and would reduce the impact to less than significant.

3.6.1.2 Project-Specific GHG Emissions Analysis

Construction Emissions

Project construction GHG emissions were estimated using CalEEMod as described in Section 2.3. Emissions of GHGs related to the construction of the project would be temporary. As shown in Table 17, *Construction GHG Emissions*, the total estimated GHG emissions associated with construction of the project would be approximately 5,065 MT CO_2e. Construction period emissions are typically amortized (i.e., averaged) over the anticipated 30-year lifespan of the project buildings. Averaged over 30 years, the proposed construction activities would contribute approximately 168.8 MT CO_2e emissions per year.

Table 17
CONSTRUCTION GHG EMISSIONS

Project Phase and Year	Emissions (MT CO_2e)
Phase 1 2022	1,519.0
Phase 1 2023	2,333.2
Phase 1 2024	1,059.3
Phase 2 2024	153.4
TOTAL	**5,064.9**
Amortized Emissions (Total Emission/30 Years)	*168.8*

Source: CalEEMod, output data is provided in Appendix A.
Notes: Totals may not sum due to rounding.
MT = metric ton; CO_2e = carbon dioxide equivalent

As noted above, BAAQMD has not adopted a threshold for determining the significance of a project's temporary construction GHG emissions. However, anticipated construction emissions for the project are provided below for informational purposes. Impacts would be less than significant, and no mitigation measures are required.

Operational Emissions

The project's operational GHG emissions and the existing land use GHG emissions were estimated using CalEEMod as described in Section 3.4. The complete modeling output is included as Appendix A to this report. The project's net annual operational emissions would be the total project annual emissions for the first year of full buildout, after completion of both Phase 1 and Phase 2 in 2024. As shown in Table 18, *Total Operational GHG Emissions*, the project would result in approximately 2,024 MT CO_2e per year.

For comparison with the BAAQMD efficiency threshold, adjusted for the year 2025, the project's total operational emissions were divided by the project's estimated future service population. Based on the emissions modeling, the CalEEMod default population density for condos/townhomes for Alameda

County would be 2.86 persons per DU, and the project's future residential population would be approximately 1,058 residents. From information provided by the project applicant, the project commercial retail space would result in approximately 7 employees. Therefore, the project's estimated service population would be 1,065. As shown in Table 18, the project's per capita emissions would be approximately 1.90 MT CO_2e per year, below the adjusted threshold of MT CO_2e per service population per year. Therefore, the project would not generate GHG emissions that may have a significant impact on the environment, and the impact would be less than significant and would not exceed the significance determination in the PEIR.

Table 18
TOTAL OPERATIONAL GHG EMISSIONS

Project Phase and Source	Emissions (MT CO_2e/year)
Phase 1 Area	4.2
Phase 1 Energy	410.6
Phase 1 Vehicular (Mobile)	1,371.9
Phase 1 Solid Waste	61.8
Phase 1 Water and Wastewater	38.1
Phase 1 Subtotal[1]	1,886.5
Phase 2 Area	0.3
Phase 2 Energy	31.8
Phase 2 Vehicular (Mobile)	96.5
Phase 2 Solid Waste	4.7
Phase 2 Water and Wastewater	4.4
Phase 2 Subtotal[1]	137.7
Total Emissions (Phase 1 Subtotal + Phase 2 Subtotal)[1]	2,024.2
Service Population	1,065
Emissions Per Service Population[2]	**1.90**
Threshold (MT CO_2e per service population per year)	*3.56*
Exceed Threshold?	***No***

Source: CalEEMod, output data is provided in Appendix A.

[1] Totals may not sum due to rounding.

[2] Net emissions per service population = total emissions divided by the estimated future service population of 1,098.

MT = metric ton; CO_2e = carbon dioxide equivalent

Mitigation Measures

The PEIR included Mitigation Measure 4.6-1, which included a list of project design features that were intended to reduce the Specific Plan's GHG emissions to below the 4.6 MT/SP threshold. The proposed project includes mandated project-specific design features, including solar electricity generation, low water use plumbing fixtures, water efficient landscaping and irrigations, and solid waste diversion, as described in Section 3.4. In addition, the project trip generation analysis accounts for trip reductions resulting from the project's mixed land use (residential and local serving commercial/retail; Fehr & Peers 2021.

As shown in Table 18 above, incorporation of these project design features would achieve the same goal as PEIR Mitigation Measure 4.6-1, and the project's emissions would be below the threshold. Therefore, no further mitigation is required.

3.6.2 PEIR Impact 4.6-2

Implementation of the proposed project would not conflict with an applicable GHG reduction plan, policy, or regulation.

3.6.2.1 GHG Reduction Plans Consistency Conclusions in the PEIR

This issue was analyzed in the PEIR which concluded that the Specific Plan would not conflict with the City's CAP and the impact would be less than significant.

3.6.2.2 Project-Specific GHG Reduction Plans Consistency Analysis

There have been no updates to the City's CAP Initial Framework or GHG reduction-related policies in the General Plan since the PEIR was certified in 2011. Since the project would be consistent with the Specific Plan's intent for mixed-use TOD, the project would be consistent with the CAP Initial Framework and General Plan. In addition, because the growth in the City's housing and population as a result of the project would be consistent with the Specific Plan, the project would be consistent with the growth assumptions used to develop the *Plan Bay Area 2040* RTP/SCS.

The project design features listed in Section 1.4 would support the policies included in the 2013 General Plan (2013). These General Plan policies include:

Action CS-3.E Water Efficient Landscaping. Continue to implement the City's Bay Friendly Landscaping Guidelines for water-efficient landscaping, including low water use plants and more efficient irrigation systems. Adopt more stringent outdoor water use policies for individual development proposals where feasible.

Policy CS-3.2. Water Conservation Standards. Promote conservation through development standards, building requirements, irrigation requirements, landscape design guidelines, and other applicable City policies and programs.

Policy CS-5.1 Linking Land Use and Transportation. Encourage land use and transportation patterns that reduce dependence on automobiles. This includes siting well-designed higher-density, mixed-use development near the proposed Dumbarton Rail station and in other areas with frequent transit service.

Policy CS-5.2 Pedestrian and Bicycle Friendly Design. Ensure that new development is planned and designed to facilitate walking and bicycling as well as driving. This can potentially reduce the number of vehicle trips and related GHG emissions.

Policy CS-6.2 Encouraging Greener Construction. Encourage greener construction methods and greater use of recycled-content materials in new residential, commercial, and industrial construction projects in accordance to the latest CalGreen building standards.

Policy CS-7.1 Reducing Energy Use. Support measures to reduce energy consumption and increase energy efficiency in residential, commercial, industrial, and public buildings.

Policy CS-7.3 Designing for Energy Efficiency. Support building design, site planning, and subdivision design methods that reduce heating and cooling costs and achieve greater energy efficiency.

As discussed in Issue 1, above, the project would not exceed the BAAQMD's project level thresholds developed to meet the reduction mandates of AB 32 or the adjusted 2025 threshold to meet the reduction mandates of SB 32. Therefore, the project would be consistent with the CARB Climate Change Scoping Plan developed to implement the mandates of AB 32 and SB 32.

In addition, if a future transit project is approved and constructed using the Dumbarton Rail Corridor, all of the project's future residents would be within ½ mile of the future train station and the project would be considered TOD. As discussed in Section 3.3, the transportation sector is the largest source of GHG emissions in the state and in the San Francisco Bay Area region. A project's GHG emissions from cars and light trucks are directly correlated to the project's VMT. A reduction of VMT through implementation of TOD projects is a key component of regional transportation and SCS plans, such as *Plan Bay Area 2040*, to mitigate the adverse effects of traffic congestion and reduce GHGs (MTC and ABAG 2017).

Therefore, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases, and impacts would be less than significant and would not exceed the conclusions in the PEIR.

3.6.2.3 Mitigation Measures

No mitigation is required.

4.0 LIST OF PREPARERS

Martin Rolph	Air Quality Specialist
Victor Ortiz	Senior Air Quality Specialist
Joanne M. Dramko, AICP	Principal Air Quality Specialist, QAQC
Lesley Owning	Project Manager

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Appendix A

CalEEMod Output

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FMC Willow Solar Panel Requirements

Factors for Climate Zone 3	
A	0.628
B	1.12
CF	20%

	DU	SF/Unit	Total SF	Garage Sf	Garage Tot.	Conditioned Space	kW	kWhr/year
Phase 1								
PA2 (UA Stack)	64.0	2,088.3	133,652.4	400.0	25,600.0	108,052.4	139.5	244,468.7
PA3 (UA Split less than 4 story)	78.0	1,837.2	143,302.0	400.0	31,200.0	112,102.0	157.8	276,395.6
PA4 (UA Towns)	66.0	1,973.9	130,274.6	400.0	26,400.0	103,874.6	139.2	243,796.5
Subtotal	**208.0**		**407,229.0**		**83,200.0**	**324,029.0**	**436.5**	**764,660.7**
Phase 2								
PA4 (UA Towns)	26.0		51,409.0		10,400.0	41,009.0	54.9	96,138.6
Total	**234.0**		**458,638.0**		**93,600.0**	**365,038.0**	**491.3**	**860,799.4**

Notes:
1. Calculations based on 2019 Title 24 Residential Compliance Manual for new residential buildings with 3 or fewer residential floors. The project's 91 DU affordable housing and 45 of the PA3 DU have 4 residential floors and are not included in these calculations.
2. The CEC California Building Climate Zone (zone 3) used in these calculations is not the same as the CEC Forecasting Climate Zone (zone 5) used in CalEEMod.
3. Factors are for Alameda County where A is the climate zone 3 adjustment factor, B is the climate zone 3 dwelling unit factor, and CF is the capacity factor which accounts for climate, daylight hours, roof pitch and orientation, and transmission loss.
4. Solar power output requirement is calculated by 2019 Title 24 Residential Compliance Manual Equation 7-1:
kW = (CFA X A) / 1000 + (DU X B).
5. Annual solar energy generated is calculated by:

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

IPQ-37 FMC Willow Phase 1

Alameda County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.61	1000sqft	0.00	1,610.00	0
Other Asphalt Surfaces	321.70	1000sqft	7.39	321,700.00	0
Condo/Townhouse	253.00	Dwelling Unit	8.65	479,306.00	724
Condo/Townhouse High Rise	91.00	Dwelling Unit	0.38	78,975.00	260
Strip Mall	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run 5 - Revised site plan: 344 DU Phase 1, add transit station improvements.

Land Use - Condo/townhouse high rise = affordable housing units.
Retail = ground floor mixed use.
General office building = residential common areas in mixed use building.
Parking includes parking lots streets, sidewalks, transit station improvements.

Construction Phase - Construction schedule per project applicant/engineer.
Site Preparation included in grading.
Underground utilites and paving concurrent with building construction.
Architectural coating concurrent with the last 6 months of building construction.

Off-road Equipment -

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Equipment per project applicant/engineer

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 2 dump trucks and 1 water truck.

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 1 dump truck and 1 water truck.

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 1 water truck.

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 1 dump truck and 1 water truck.

Trips and VMT - Vendor trips during Underground Utilites for delivery of supplies and materials.
370 round trips for import of asphalt, aggreagte, and/or concrete during paving.

Demolition - 12,680 tons concrete/ashpalt exported during demolition.

Grading - 77,700 CY soil imported during grading.

Architectural Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Vehicle Trips - Trip generation rates per traffic study (Fehr & Peers 2021).
Future transit station trips applied to parking.
Trip generation acounts for "internalization," all trip purposes set to 100% primary.

Woodstoves - No hearths per project applicant.

Area Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Dust mitigation per BAAQMD BCMMs.
Tier 4 engine mitigation per Mitigation Measure AQ-1.

Energy Mitigation - Per 2019 Title 24 Residential Complinace Manual Eq. 7-1: kW = (CFA X A)/1000 + (DU X B)
kW = (324029 X 0.628)/1000 + (208 X 1.12) = 436.5 kW
kWhr/year = kW X 24 hours X 365 days X 20% = 764,661 kWhr/year

Water Mitigation - Water Mitigation - 20% water conservation per 2019 CalGreen not accounted for in model defaults.

Waste Mitigation - 25% solid waste diversion per AB 341 not accounted for in model defaults.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	150	100
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	30.00	107.00
tblConstructionPhase	NumDays	300.00	412.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	130.00
tblFireplaces	NumberGas	37.95	0.00
tblFireplaces	NumberGas	13.65	0.00
tblFireplaces	NumberWood	43.01	0.00
tblFireplaces	NumberWood	15.47	0.00
tblGrading	MaterialImported	0.00	77,700.00
tblLandUse	LandUseSquareFeet	253,000.00	479,306.00
tblLandUse	LandUseSquareFeet	91,000.00	78,975.00
tblLandUse	LotAcreage	0.04	0.00
tblLandUse	LotAcreage	15.81	8.65
tblLandUse	LotAcreage	1.42	0.38
tblLandUse	LotAcreage	0.09	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	370.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	8.14	4.00
tblVehicleTrips	ST_TR	4.91	4.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	0.00	0.63
tblVehicleTrips	ST_TR	42.04	8.60
tblVehicleTrips	SU_TR	6.28	4.00
tblVehicleTrips	SU_TR	4.09	4.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	0.00	0.63
tblVehicleTrips	SU_TR	20.43	8.60
tblVehicleTrips	WD_TR	1.32	4.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	WD_TR	5.44	4.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	0.00	0.63
tblVehicleTrips	WD_TR	44.32	8.60
tblWoodstoves	NumberCatalytic	5.06	0.00
tblWoodstoves	NumberCatalytic	1.82	0.00
tblWoodstoves	NumberNoncatalytic	5.06	0.00
tblWoodstoves	NumberNoncatalytic	1.82	0.00

2.0 Emissions Summary

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	8.0894	94.3419	57.8396	0.1933	20.3667	3.3514	23.7181	7.8322	3.0884	10.9206	0.0000	19,351.1125	19,351.1125	4.3382	0.9755	19,750.2528
2023	12.1055	89.0242	109.0953	0.2370	4.4347	3.8544	8.2891	1.1940	3.7104	4.9044	0.0000	23,059.2704	23,059.2704	3.1764	0.6220	23,324.0253
2024	36.3296	65.3847	87.2965	0.1835	4.4052	2.6957	7.1009	1.1823	2.6239	3.8062	0.0000	17,791.0650	17,791.0650	1.7928	0.3708	17,946.3827
Maximum	**36.3296**	**94.3419**	**109.0953**	**0.2370**	**20.3667**	**3.8544**	**23.7181**	**7.8322**	**3.7104**	**10.9206**	**0.0000**	**23,059.2704**	**23,059.2704**	**4.3382**	**0.9755**	**23,324.0253**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.1605	22.6541	69.3580	0.1933	10.1976	0.3609	10.5585	3.8062	0.3547	4.1609	0.0000	19,351.1125	19,351.1125	4.3382	0.9755	19,750.2527
2023	5.6479	25.9204	121.6581	0.2370	4.4347	0.5621	4.9968	1.1940	0.5585	1.7525	0.0000	23,059.2704	23,059.2704	3.1764	0.6220	23,324.0253
2024	31.4403	19.6177	94.5845	0.1835	4.4052	0.4114	4.8166	1.1823	0.4089	1.5912	0.0000	17,791.0650	17,791.0650	1.7928	0.3708	17,946.3827
Maximum	**31.4403**	**25.9204**	**121.6581**	**0.2370**	**10.1976**	**0.5621**	**10.5585**	**3.8062**	**0.5585**	**4.1609**	**0.0000**	**23,059.2704**	**23,059.2704**	**4.3382**	**0.9755**	**23,324.0253**

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	30.56	72.59	-12.34	0.00	34.82	86.52	47.91	39.44	85.97	61.77	0.00	0.00	0.00	0.00	0.00	0.00

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.0243	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574	0.0000	51.1736	51.1736	0.0491	0.0000	52.4017
Energy	0.1799	1.5377	0.6598	9.8100e-003		0.1243	0.1243		0.1243	0.1243		1,962.0382	1,962.0382	0.0376	0.0360	1,973.6976
Mobile	3.6489	4.9809	37.4807	0.0781	8.8730	0.0586	8.9316	2.3632	0.0546	2.4178		8,145.3132	8,145.3132	0.5108	0.4219	8,283.8157
Total	**17.8530**	**6.8455**	**66.5274**	**0.0894**	**8.8730**	**0.3403**	**9.2133**	**2.3632**	**0.3363**	**2.6995**	**0.0000**	**10,158.5250**	**10,158.5250**	**0.5975**	**0.4579**	**10,309.9150**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.0243	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574	0.0000	51.1736	51.1736	0.0491	0.0000	52.4017
Energy	0.1799	1.5377	0.6598	9.8100e-003		0.1243	0.1243		0.1243	0.1243		1,962.0382	1,962.0382	0.0376	0.0360	1,973.6976
Mobile	3.6489	4.9809	37.4807	0.0781	8.8730	0.0586	8.9316	2.3632	0.0546	2.4178		8,145.3132	8,145.3132	0.5108	0.4219	8,283.8157
Total	**17.8530**	**6.8455**	**66.5274**	**0.0894**	**8.8730**	**0.3403**	**9.2133**	**2.3632**	**0.3363**	**2.6995**	**0.0000**	**10,158.5250**	**10,158.5250**	**0.5975**	**0.4579**	**10,309.9150**

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2022	4/21/2022	5	15	
2	Grading	Grading	4/22/2022	9/19/2022	5	107	
3	Underground Utilities	Trenching	9/20/2022	9/19/2023	5	261	
4	Building Construction	Building Construction	3/1/2023	9/26/2024	5	412	
5	Paving	Paving	9/20/2023	10/10/2023	5	15	
6	Architectural Coating	Architectural Coating	3/29/2024	9/26/2024	5	130	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 642

Acres of Paving: 7.39

Residential Indoor: 1,130,519; Residential Outdoor: 376,840; Non-Residential Indoor: 8,415; Non-Residential Outdoor: 2,805; Striped Parking Area: 19,302 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Off-Highway Trucks	3	8.00	402	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Off-Highway Trucks	2	8.00	402	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	4	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Underground Utilities	Cement and Mortar Mixers	1	8.00	9	0.56
Underground Utilities	Excavators	2	8.00	158	0.38
Underground Utilities	Off-Highway Trucks	2	8.00	402	0.38
Underground Utilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	4	8.00	63	0.31
Building Construction	Air Compressors	8	8.00	78	0.48
Building Construction	Cranes	4	7.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	8	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	8.00	9	0.56
Paving	Off-Highway Trucks	1	8.00	402	0.38
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	28.00	0.00	1,254.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	14	35.00	0.00	9,713.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	7	18.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	34	385.00	90.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	11	28.00	0.00	370.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	77.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0893	0.0000	18.0893	2.7389	0.0000	2.7389			0.0000			0.0000
Off-Road	4.7091	42.1360	35.5557	0.0858		1.9250	1.9250		1.7950	1.7950		8,278.8643	8,278.8643	2.3589		8,337.8356
Total	**4.7091**	**42.1360**	**35.5557**	**0.0858**	**18.0893**	**1.9250**	**20.0143**	**2.7389**	**1.7950**	**4.5339**		**8,278.8643**	**8,278.8643**	**2.3589**		**8,337.8356**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3785	14.2335	2.9055	0.0524	1.4642	0.1291	1.5934	0.4015	0.1236	0.5251		5,643.3373	5,643.3373	0.1220	0.8913	5,911.9932
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0849	0.0621	0.6964	1.9300e-003	0.2300	1.2200e-003	0.2312	0.0610	1.1200e-003	0.0621		196.0826	196.0826	6.6600e-003	6.1200e-003	198.0735
Total	**0.4634**	**14.2955**	**3.6019**	**0.0543**	**1.6942**	**0.1304**	**1.8246**	**0.4625**	**0.1247**	**0.5872**		**5,839.4199**	**5,839.4199**	**0.1287**	**0.8974**	**6,110.0667**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1402	0.0000	8.1402	1.2325	0.0000	1.2325			0.0000			0.0000
Off-Road	1.0222	4.4297	45.6865	0.0858		0.1363	0.1363		0.1363	0.1363	0.0000	8,278.8643	8,278.8643	2.3589		8,337.8356
Total	**1.0222**	**4.4297**	**45.6865**	**0.0858**	**8.1402**	**0.1363**	**8.2765**	**1.2325**	**0.1363**	**1.3688**	**0.0000**	**8,278.8643**	**8,278.8643**	**2.3589**		**8,337.8356**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3785	14.2335	2.9055	0.0524	1.4642	0.1291	1.5934	0.4015	0.1236	0.5251		5,643.3373	5,643.3373	0.1220	0.8913	5,911.9932
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0849	0.0621	0.6964	1.9300e-003	0.2300	1.2200e-003	0.2312	0.0610	1.1200e-003	0.0621		196.0826	196.0826	6.6600e-003	6.1200e-003	198.0735
Total	**0.4634**	**14.2955**	**3.6019**	**0.0543**	**1.6942**	**0.1304**	**1.8246**	**0.4625**	**0.1247**	**0.5872**		**5,839.4199**	**5,839.4199**	**0.1287**	**0.8974**	**6,110.0667**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.4893	0.0000	18.4893	7.3200	0.0000	7.3200			0.0000			0.0000
Off-Road	7.5722	78.8091	53.8143	0.1340		3.2096	3.2096		2.9528	2.9528		12,978.2832	12,978.2832	4.1974		13,083.2192
Total	**7.5722**	**78.8091**	**53.8143**	**0.1340**	**18.4893**	**3.2096**	**21.6989**	**7.3200**	**2.9528**	**10.2728**		**12,978.2832**	**12,978.2832**	**4.1974**		**13,083.2192**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4110	15.4552	3.1549	0.0569	1.5899	0.1402	1.7301	0.4360	0.1342	0.5701		6,127.7261	6,127.7261	0.1325	0.9678	6,419.4417
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1062	0.0776	0.8705	2.4100e-003	0.2875	1.5200e-003	0.2890	0.0763	1.4000e-003	0.0777		245.1032	245.1032	8.3200e-003	7.6500e-003	247.5919
Total	**0.5171**	**15.5328**	**4.0253**	**0.0593**	**1.8774**	**0.1417**	**2.0192**	**0.5123**	**0.1356**	**0.6478**		**6,372.8293**	**6,372.8293**	**0.1408**	**0.9755**	**6,667.0335**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.3202	0.0000	8.3202	3.2940	0.0000	3.2940			0.0000			0.0000
Off-Road	1.6434	7.1213	65.3327	0.1340		0.2191	0.2191		0.2191	0.2191	0.0000	12,978.2832	12,978.2832	4.1974		13,083.2192
Total	**1.6434**	**7.1213**	**65.3327**	**0.1340**	**8.3202**	**0.2191**	**8.5393**	**3.2940**	**0.2191**	**3.5131**	**0.0000**	**12,978.2832**	**12,978.2832**	**4.1974**		**13,083.2192**

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4110	15.4552	3.1549	0.0569	1.5899	0.1402	1.7301	0.4360	0.1342	0.5701		6,127.7261	6,127.7261	0.1325	0.9678	6,419.4417
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1062	0.0776	0.8705	2.4100e-003	0.2875	1.5200e-003	0.2890	0.0763	1.4000e-003	0.0777		245.1032	245.1032	8.3200e-003	7.6500e-003	247.5919
Total	**0.5171**	**15.5328**	**4.0253**	**0.0593**	**1.8774**	**0.1417**	**2.0192**	**0.5123**	**0.1356**	**0.6478**		**6,372.8293**	**6,372.8293**	**0.1408**	**0.9755**	**6,667.0335**

3.4 Underground Utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8498	15.3008	18.0121	0.0437		0.6583	0.6583		0.6068	0.6068		4,210.9953	4,210.9953	1.3508		4,244.7660
Total	**1.8498**	**15.3008**	**18.0121**	**0.0437**		**0.6583**	**0.6583**		**0.6068**	**0.6068**		**4,210.9953**	**4,210.9953**	**1.3508**		**4,244.7660**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0202	0.5582	0.1566	2.0900e-003	0.0678	5.5700e-003	0.0733	0.0195	5.3300e-003	0.0248		222.6351	222.6351	3.3500e-003	0.0334	232.6667
Worker	0.0546	0.0399	0.4477	1.2400e-003	0.1479	7.8000e-004	0.1487	0.0392	7.2000e-004	0.0399		126.0531	126.0531	4.2800e-003	3.9400e-003	127.3330
Total	**0.0748**	**0.5981**	**0.6043**	**3.3300e-003**	**0.2156**	**6.3500e-003**	**0.2220**	**0.0587**	**6.0500e-003**	**0.0648**		**348.6882**	**348.6882**	**7.6300e-003**	**0.0373**	**359.9996**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5851	2.6490	24.6832	0.0437		0.0845	0.0845		0.0845	0.0845	0.0000	4,210.9953	4,210.9953	1.3508		4,244.7660
Total	**0.5851**	**2.6490**	**24.6832**	**0.0437**		**0.0845**	**0.0845**		**0.0845**	**0.0845**	**0.0000**	**4,210.9953**	**4,210.9953**	**1.3508**		**4,244.7660**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0202	0.5582	0.1566	2.0900e-003	0.0678	5.5700e-003	0.0733	0.0195	5.3300e-003	0.0248		222.6351	222.6351	3.3500e-003	0.0334	232.6667
Worker	0.0546	0.0399	0.4477	1.2400e-003	0.1479	7.8000e-004	0.1487	0.0392	7.2000e-004	0.0399		126.0531	126.0531	4.2800e-003	3.9400e-003	127.3330
Total	**0.0748**	**0.5981**	**0.6043**	**3.3300e-003**	**0.2156**	**6.3500e-003**	**0.2220**	**0.0587**	**6.0500e-003**	**0.0648**		**348.6882**	**348.6882**	**7.6300e-003**	**0.0373**	**359.9996**

3.4 Underground Utilities - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7466	13.6726	17.8635	0.0437		0.5756	0.5756		0.5307	0.5307		4,213.6576	4,213.6576	1.3517		4,247.4498
Total	**1.7466**	**13.6726**	**17.8635**	**0.0437**		**0.5756**	**0.5756**		**0.5307**	**0.5307**		**4,213.6576**	**4,213.6576**	**1.3517**		**4,247.4498**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8700e-003	0.4468	0.1346	2.0000e-003	0.0678	2.6400e-003	0.0704	0.0195	2.5300e-003	0.0220		213.4422	213.4422	2.8900e-003	0.0320	223.0419
Worker	0.0509	0.0354	0.4155	1.2000e-003	0.1479	7.4000e-004	0.1486	0.0392	6.8000e-004	0.0399		122.8501	122.8501	3.8800e-003	3.6500e-003	124.0345
Total	**0.0608**	**0.4822**	**0.5500**	**3.2000e-003**	**0.2156**	**3.3800e-003**	**0.2190**	**0.0587**	**3.2100e-003**	**0.0619**		**336.2923**	**336.2923**	**6.7700e-003**	**0.0356**	**347.0765**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5851	2.6490	24.6831	0.0437		0.0845	0.0845		0.0845	0.0845	0.0000	4,213.6576	4,213.6576	1.3517		4,247.4498
Total	**0.5851**	**2.6490**	**24.6831**	**0.0437**		**0.0845**	**0.0845**		**0.0845**	**0.0845**	**0.0000**	**4,213.6576**	**4,213.6576**	**1.3517**		**4,247.4498**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.8700e-003	0.4468	0.1346	2.0000e-003	0.0678	2.6400e-003	0.0704	0.0195	2.5300e-003	0.0220		213.4422	213.4422	2.8900e-003	0.0320	223.0419
Worker	0.0509	0.0354	0.4155	1.2000e-003	0.1479	7.4000e-004	0.1486	0.0392	6.8000e-004	0.0399		122.8501	122.8501	3.8800e-003	3.6500e-003	124.0345
Total	**0.0608**	**0.4822**	**0.5500**	**3.2000e-003**	**0.2156**	**3.3800e-003**	**0.2190**	**0.0587**	**3.2100e-003**	**0.0619**		**336.2923**	**336.2923**	**6.7700e-003**	**0.0356**	**347.0765**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.5527	63.3188	74.6577	0.1330		2.9665	2.9665		2.8893	2.8893		12,542.5289	12,542.5289	1.6946		12,584.8927
Total	**7.5527**	**63.3188**	**74.6577**	**0.1330**		**2.9665**	**2.9665**		**2.8893**	**2.8893**		**12,542.5289**	**12,542.5289**	**1.6946**		**12,584.8927**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0889	4.0211	1.2112	0.0180	0.6100	0.0238	0.6338	0.1756	0.0228	0.1984		1,920.9796	1,920.9796	0.0260	0.2878	2,007.3775
Worker	1.0883	0.7565	8.8863	0.0257	3.1627	0.0159	3.1786	0.8389	0.0146	0.8535		2,627.6273	2,627.6273	0.0829	0.0781	2,652.9605
Total	**1.1772**	**4.7776**	**10.0975**	**0.0437**	**3.7726**	**0.0397**	**3.8123**	**1.0145**	**0.0374**	**1.0519**		**4,548.6069**	**4,548.6069**	**0.1089**	**0.3658**	**4,660.3379**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4163	14.8009	81.6487	0.1330		0.3960	0.3960		0.3960	0.3960	0.0000	12,542.5289	12,542.5289	1.6946		12,584.8927
Total	**2.4163**	**14.8009**	**81.6487**	**0.1330**		**0.3960**	**0.3960**		**0.3960**	**0.3960**	**0.0000**	**12,542.5289**	**12,542.5289**	**1.6946**		**12,584.8927**

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0889	4.0211	1.2112	0.0180	0.6100	0.0238	0.6338	0.1756	0.0228	0.1984		1,920.9796	1,920.9796	0.0260	0.2878	2,007.3775
Worker	1.0883	0.7565	8.8863	0.0257	3.1627	0.0159	3.1786	0.8389	0.0146	0.8535		2,627.6273	2,627.6273	0.0829	0.0781	2,652.9605
Total	**1.1772**	**4.7776**	**10.0975**	**0.0437**	**3.7726**	**0.0397**	**3.8123**	**1.0145**	**0.0374**	**1.0519**		**4,548.6069**	**4,548.6069**	**0.1089**	**0.3658**	**4,660.3379**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.0801	59.3186	74.3260	0.1330		2.5927	2.5927		2.5233	2.5233		12,542.8202	12,542.8202	1.6607		12,584.3376
Total	**7.0801**	**59.3186**	**74.3260**	**0.1330**		**2.5927**	**2.5927**		**2.5233**	**2.5233**		**12,542.8202**	**12,542.8202**	**1.6607**		**12,584.3376**

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0866	4.0365	1.1885	0.0177	0.6100	0.0240	0.6340	0.1756	0.0230	0.1986		1,891.3639	1,891.3639	0.0260	0.2835	1,976.4880
Worker	1.0186	0.6756	8.3099	0.0248	3.1627	0.0151	3.1778	0.8389	0.0139	0.8528		2,562.8607	2,562.8607	0.0753	0.0728	2,586.4274
Total	**1.1052**	**4.7121**	**9.4984**	**0.0426**	**3.7727**	**0.0391**	**3.8118**	**1.0145**	**0.0369**	**1.0514**		**4,454.2247**	**4,454.2247**	**0.1012**	**0.3562**	**4,562.9153**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3418	14.6417	81.5918	0.1330		0.3653	0.3653		0.3653	0.3653	0.0000	12,542.8202	12,542.8202	1.6607		12,584.3376
Total	**2.3418**	**14.6417**	**81.5918**	**0.1330**		**0.3653**	**0.3653**		**0.3653**	**0.3653**	**0.0000**	**12,542.8202**	**12,542.8202**	**1.6607**		**12,584.3376**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0866	4.0365	1.1885	0.0177	0.6100	0.0240	0.6340	0.1756	0.0230	0.1986		1,891.3639	1,891.3639	0.0260	0.2835	1,976.4880
Worker	1.0186	0.6756	8.3099	0.0248	3.1627	0.0151	3.1778	0.8389	0.0139	0.8528		2,562.8607	2,562.8607	0.0753	0.0728	2,586.4274
Total	**1.1052**	**4.7121**	**9.4984**	**0.0426**	**3.7727**	**0.0391**	**3.8118**	**1.0145**	**0.0369**	**1.0514**		**4,454.2247**	**4,454.2247**	**0.1012**	**0.3562**	**4,562.9153**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9568	17.5673	22.9521	0.0437		0.8195	0.8195		0.7562	0.7562		4,191.6583	4,191.6583	1.3335		4,224.9953
Paving	1.2908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.2476**	**17.5673**	**22.9521**	**0.0437**		**0.8195**	**0.8195**		**0.7562**	**0.7562**		**4,191.6583**	**4,191.6583**	**1.3335**		**4,224.9953**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0489	3.3055	0.7418	0.0147	0.4321	0.0277	0.4597	0.1185	0.0265	0.1449		1,585.3761	1,585.3761	0.0335	0.2505	1,660.8568
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0792	0.0550	0.6463	1.8700e-003	0.2300	1.1500e-003	0.2312	0.0610	1.0600e-003	0.0621		191.1002	191.1002	6.0300e-003	5.6800e-003	192.9426
Total	**0.1281**	**3.3605**	**1.3881**	**0.0166**	**0.6621**	**0.0288**	**0.6909**	**0.1795**	**0.0275**	**0.2070**		**1,776.4763**	**1,776.4763**	**0.0395**	**0.2562**	**1,853.7994**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6356	2.9814	28.5238	0.0437		0.0977	0.0977		0.0977	0.0977	0.0000	4,191.6583	4,191.6583	1.3335		4,224.9953
Paving	1.2908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9264**	**2.9814**	**28.5238**	**0.0437**		**0.0977**	**0.0977**		**0.0977**	**0.0977**	**0.0000**	**4,191.6583**	**4,191.6583**	**1.3335**		**4,224.9953**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0489	3.3055	0.7418	0.0147	0.4321	0.0277	0.4597	0.1185	0.0265	0.1449		1,585.3761	1,585.3761	0.0335	0.2505	1,660.8568
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0792	0.0550	0.6463	1.8700e-003	0.2300	1.1500e-003	0.2312	0.0610	1.0600e-003	0.0621		191.1002	191.1002	6.0300e-003	5.6800e-003	192.9426
Total	**0.1281**	**3.3605**	**1.3881**	**0.0166**	**0.6621**	**0.0288**	**0.6909**	**0.1795**	**0.0275**	**0.2070**		**1,776.4763**	**1,776.4763**	**0.0395**	**0.2562**	**1,853.7994**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.7598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**27.9405**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2037	0.1351	1.6620	4.9700e-003	0.6325	3.0200e-003	0.6356	0.1678	2.7800e-003	0.1706		512.5722	512.5722	0.0151	0.0146	517.2855
Total	**0.2037**	**0.1351**	**1.6620**	**4.9700e-003**	**0.6325**	**3.0200e-003**	**0.6356**	**0.1678**	**2.7800e-003**	**0.1706**		**512.5722**	**512.5722**	**0.0151**	**0.0146**	**517.2855**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.7598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**27.7895**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.2037	0.1351	1.6620	4.9700e-003	0.6325	3.0200e-003	0.6356	0.1678	2.7800e-003	0.1706		512.5722	512.5722	0.0151	0.0146	517.2855
Total	**0.2037**	**0.1351**	**1.6620**	**4.9700e-003**	**0.6325**	**3.0200e-003**	**0.6356**	**0.1678**	**2.7800e-003**	**0.1706**		**512.5722**	**512.5722**	**0.0151**	**0.0146**	**517.2855**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.6489	4.9809	37.4807	0.0781	8.8730	0.0586	8.9316	2.3632	0.0546	2.4178		8,145.3132	8,145.3132	0.5108	0.4219	8,283.8157
Unmitigated	3.6489	4.9809	37.4807	0.0781	8.8730	0.0586	8.9316	2.3632	0.0546	2.4178		8,145.3132	8,145.3132	0.5108	0.4219	8,283.8157

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	1,012.00	1,012.00	1012.00	2,632,358	2,632,358
Condo/Townhouse High Rise	364.00	364.00	364.00	946,816	946,816
General Office Building	0.00	0.00	0.00		
Other Asphalt Surfaces	202.67	202.67	202.67	538,537	538,537
Strip Mall	34.40	34.40	34.40	95,981	95,981
Total	1,613.07	1,613.07	1,613.07	4,213,692	4,213,692

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	100	0	0
Condo/Townhouse High Rise	10.80	4.80	5.70	31.00	15.00	54.00	100	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	100.00	0.00	100	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Condo/Townhouse High Rise	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
General Office Building	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Other Asphalt Surfaces	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Strip Mall	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1799	1.5377	0.6598	9.8100e-003		0.1243	0.1243		0.1243	0.1243		1,962.0382	1,962.0382	0.0376	0.0360	1,973.6976
NaturalGas Unmitigated	0.1799	1.5377	0.6598	9.8100e-003		0.1243	0.1243		0.1243	0.1243		1,962.0382	1,962.0382	0.0376	0.0360	1,973.6976

IPQ-37 FMC Willow Phase 1 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	14437.9	0.1557	1.3306	0.5662	8.4900e-003		0.1076	0.1076		0.1076	0.1076		1,698.5780	1,698.5780	0.0326	0.0311	1,708.6718
Condo/Townhouse High Rise	2104.97	0.0227	0.1940	0.0826	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.6435	247.6435	4.7500e-003	4.5400e-003	249.1151
General Office Building	84.4699	9.1000e-004	8.2800e-003	6.9600e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004		9.9376	9.9376	1.9000e-004	1.8000e-004	9.9967
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	49.9726	5.4000e-004	4.9000e-003	4.1200e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		5.8791	5.8791	1.1000e-004	1.1000e-004	5.9141
Total		**0.1799**	**1.5377**	**0.6598**	**9.8100e-003**		**0.1243**	**0.1243**		**0.1243**	**0.1243**		**1,962.0382**	**1,962.0382**	**0.0376**	**0.0360**	**1,973.6977**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	14.4379	0.1557	1.3306	0.5662	8.4900e-003		0.1076	0.1076		0.1076	0.1076		1,698.5780	1,698.5780	0.0326	0.0311	1,708.6718
Condo/Townhouse High Rise	2.10497	0.0227	0.1940	0.0826	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.6435	247.6435	4.7500e-003	4.5400e-003	249.1151
General Office Building	0.0844699	9.1000e-004	8.2800e-003	6.9600e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004		9.9376	9.9376	1.9000e-004	1.8000e-004	9.9967
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0499726	5.4000e-004	4.9000e-003	4.1200e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		5.8791	5.8791	1.1000e-004	1.1000e-004	5.9141
Total		**0.1799**	**1.5377**	**0.6598**	**9.8100e-003**		**0.1243**	**0.1243**		**0.1243**	**0.1243**		**1,962.0382**	**1,962.0382**	**0.0376**	**0.0360**	**1,973.6977**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	14.0243	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574	0.0000	51.1736	51.1736	0.0491	0.0000	52.4017
Unmitigated	14.0243	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574	0.0000	51.1736	51.1736	0.0491	0.0000	52.4017

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9887					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.1812					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8544	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574		51.1736	51.1736	0.0491		52.4017
Total	**14.0243**	**0.3269**	**28.3869**	**1.5000e-003**		**0.1574**	**0.1574**		**0.1574**	**0.1574**	**0.0000**	**51.1736**	**51.1736**	**0.0491**	**0.0000**	**52.4017**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9887					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.1812					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8544	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574		51.1736	51.1736	0.0491		52.4017
Total	**14.0243**	**0.3269**	**28.3869**	**1.5000e-003**		**0.1574**	**0.1574**		**0.1574**	**0.1574**	**0.0000**	**51.1736**	**51.1736**	**0.0491**	**0.0000**	**52.4017**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

IPQ-37 FMC Willow Phase 1

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.61	1000sqft	0.00	1,610.00	0
Other Asphalt Surfaces	321.70	1000sqft	7.39	321,700.00	0
Condo/Townhouse	253.00	Dwelling Unit	8.65	479,306.00	724
Condo/Townhouse High Rise	91.00	Dwelling Unit	0.38	78,975.00	260
Strip Mall	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run 5 - Revised site plan: 344 DU Phase 1, add transit station improvements.

Land Use - Condo/townhouse high rise = affordable housing units.
Retail = ground floor mixed use.
General office building = residential common areas in mixed use building.
Parking includes parking lots streets, sidewalks, transit station improvements.

Construction Phase - Construction schedule per project applicant/engineer.
Site Preparation included in grading.
Underground utilites and paving concurrent with building construction.
Architectural coating concurrent with the last 6 months of building construction.

Off-road Equipment -

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Equipment per project applicant/engineer

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 2 dump trucks and 1 water truck.

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 1 dump truck and 1 water truck.

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 1 water truck.

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 1 dump truck and 1 water truck.

Trips and VMT - Vendor trips during Underground Utilites for delivery of supplies and materials.
370 round trips for import of asphalt, aggreagte, and/or concrete during paving.

Demolition - 12,680 tons concrete/ashpalt exported during demolition.

Grading - 77,700 CY soil imported during grading.

Architectural Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Vehicle Trips - Trip generation rates per traffic study (Fehr & Peers 2021).
Future transit station trips applied to parking.
Trip generation acounts for "internalization," all trip purposes set to 100% primary.

Woodstoves - No hearths per project applicant.

Area Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Dust mitigation per BAAQMD BCMMs.
Tier 4 engine mitigation per Mitigation Measure AQ-1.

Energy Mitigation - Per 2019 Title 24 Residential Complinace Manual Eq. 7-1: kW = (CFA X A)/1000 + (DU X B)
kW = (324029 X 0.628)/1000 + (208 X 1.12) = 436.5 kW
kWhr/year = kW X 24 hours X 365 days X 20% = 764,661 kWhr/year

Water Mitigation - Water Mitigation - 20% water conservation per 2019 CalGreen not accounted for in model defaults.

Waste Mitigation - 25% solid waste diversion per AB 341 not accounted for in model defaults.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	150	100
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	30.00	107.00
tblConstructionPhase	NumDays	300.00	412.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	130.00
tblFireplaces	NumberGas	37.95	0.00
tblFireplaces	NumberGas	13.65	0.00
tblFireplaces	NumberWood	43.01	0.00
tblFireplaces	NumberWood	15.47	0.00
tblGrading	MaterialImported	0.00	77,700.00
tblLandUse	LandUseSquareFeet	253,000.00	479,306.00
tblLandUse	LandUseSquareFeet	91,000.00	78,975.00
tblLandUse	LotAcreage	0.04	0.00
tblLandUse	LotAcreage	15.81	8.65
tblLandUse	LotAcreage	1.42	0.38
tblLandUse	LotAcreage	0.09	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	370.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	8.14	4.00
tblVehicleTrips	ST_TR	4.91	4.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	0.00	0.63
tblVehicleTrips	ST_TR	42.04	8.60
tblVehicleTrips	SU_TR	6.28	4.00
tblVehicleTrips	SU_TR	4.09	4.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	0.00	0.63
tblVehicleTrips	SU_TR	20.43	8.60
tblVehicleTrips	WD_TR	1.32	4.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	WD_TR	5.44	4.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	0.00	0.63
tblVehicleTrips	WD_TR	44.32	8.60
tblWoodstoves	NumberCatalytic	5.06	0.00
tblWoodstoves	NumberCatalytic	1.82	0.00
tblWoodstoves	NumberNoncatalytic	5.06	0.00
tblWoodstoves	NumberNoncatalytic	1.82	0.00

2.0 Emissions Summary

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	8.0984	93.5071	57.8231	0.1935	20.3667	3.3512	23.7179	7.8322	3.0882	10.9204	0.0000	19,367.4610	19,367.4610	4.3378	0.9740	19,766.1451
2023	12.0944	88.4566	109.4340	0.2390	4.4347	3.8543	8.2890	1.1940	3.7103	4.9043	0.0000	23,272.0438	23,272.0438	3.1658	0.6096	23,532.8530
2024	36.3104	65.0005	87.6263	0.1858	4.4052	2.6956	7.1008	1.1823	2.6238	3.8061	0.0000	18,024.8732	18,024.8732	1.7816	0.3583	18,176.1874
Maximum	**36.3104**	**93.5071**	**109.4340**	**0.2390**	**20.3667**	**3.8543**	**23.7179**	**7.8322**	**3.7103**	**10.9204**	**0.0000**	**23,272.0438**	**23,272.0438**	**4.3378**	**0.9740**	**23,532.8530**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.1696	21.8193	69.3415	0.1935	10.1976	0.3607	10.5583	3.8062	0.3545	4.1607	0.0000	19,367.4610	19,367.4610	4.3378	0.9740	19,766.1451
2023	5.6368	25.3528	121.9968	0.2390	4.4347	0.5620	4.9967	1.1940	0.5584	1.7524	0.0000	23,272.0438	23,272.0438	3.1658	0.6096	23,532.8530
2024	31.4211	19.2335	94.9144	0.1858	4.4052	0.4113	4.8165	1.1823	0.4088	1.5911	0.0000	18,024.8732	18,024.8732	1.7816	0.3583	18,176.1874
Maximum	**31.4211**	**25.3528**	**121.9968**	**0.2390**	**10.1976**	**0.5620**	**10.5583**	**3.8062**	**0.5584**	**4.1607**	**0.0000**	**23,272.0438**	**23,272.0438**	**4.3378**	**0.9740**	**23,532.8530**

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	30.57	73.11	-12.31	0.00	34.82	86.53	47.91	39.44	85.97	61.77	0.00	0.00	0.00	0.00	0.00	0.00

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.0243	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574	0.0000	51.1736	51.1736	0.0491	0.0000	52.4017
Energy	0.1799	1.5377	0.6598	9.8100e-003		0.1243	0.1243		0.1243	0.1243		1,962.0382	1,962.0382	0.0376	0.0360	1,973.6976
Mobile	4.0634	4.3582	35.0823	0.0826	8.8730	0.0585	8.9316	2.3632	0.0546	2.4178		8,622.3076	8,622.3076	0.4519	0.3881	8,749.2469
Total	**18.2675**	**6.2229**	**64.1290**	**0.0940**	**8.8730**	**0.3402**	**9.2133**	**2.3632**	**0.3363**	**2.6995**	**0.0000**	**10,635.5195**	**10,635.5195**	**0.5386**	**0.4240**	**10,775.3462**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.0243	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574	0.0000	51.1736	51.1736	0.0491	0.0000	52.4017
Energy	0.1799	1.5377	0.6598	9.8100e-003		0.1243	0.1243		0.1243	0.1243		1,962.0382	1,962.0382	0.0376	0.0360	1,973.6976
Mobile	4.0634	4.3582	35.0823	0.0826	8.8730	0.0585	8.9316	2.3632	0.0546	2.4178		8,622.3076	8,622.3076	0.4519	0.3881	8,749.2469
Total	**18.2675**	**6.2229**	**64.1290**	**0.0940**	**8.8730**	**0.3402**	**9.2133**	**2.3632**	**0.3363**	**2.6995**	**0.0000**	**10,635.5195**	**10,635.5195**	**0.5386**	**0.4240**	**10,775.3462**

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2022	4/21/2022	5	15	
2	Grading	Grading	4/22/2022	9/19/2022	5	107	
3	Underground Utilities	Trenching	9/20/2022	9/19/2023	5	261	
4	Building Construction	Building Construction	3/1/2023	9/26/2024	5	412	
5	Paving	Paving	9/20/2023	10/10/2023	5	15	
6	Architectural Coating	Architectural Coating	3/29/2024	9/26/2024	5	130	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 642

Acres of Paving: 7.39

Residential Indoor: 1,130,519; Residential Outdoor: 376,840; Non-Residential Indoor: 8,415; Non-Residential Outdoor: 2,805; Striped Parking Area: 19,302 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Off-Highway Trucks	3	8.00	402	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Off-Highway Trucks	2	8.00	402	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	4	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Underground Utilities	Cement and Mortar Mixers	1	8.00	9	0.56
Underground Utilities	Excavators	2	8.00	158	0.38
Underground Utilities	Off-Highway Trucks	2	8.00	402	0.38
Underground Utilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	4	8.00	63	0.31
Building Construction	Air Compressors	8	8.00	78	0.48
Building Construction	Cranes	4	7.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	8	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	8.00	9	0.56
Paving	Off-Highway Trucks	1	8.00	402	0.38
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	28.00	0.00	1,254.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	14	35.00	0.00	9,713.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	7	18.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	34	385.00	90.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	11	28.00	0.00	370.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	77.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0893	0.0000	18.0893	2.7389	0.0000	2.7389			0.0000			0.0000
Off-Road	4.7091	42.1360	35.5557	0.0858		1.9250	1.9250		1.7950	1.7950		8,278.8643	8,278.8643	2.3589		8,337.8356
Total	**4.7091**	**42.1360**	**35.5557**	**0.0858**	**18.0893**	**1.9250**	**20.0143**	**2.7389**	**1.7950**	**4.5339**		**8,278.8643**	**8,278.8643**	**2.3589**		**8,337.8356**

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3881	13.4786	2.8541	0.0524	1.4642	0.1290	1.5932	0.4015	0.1234	0.5249		5,640.9077	5,640.9077	0.1225	0.8909	5,909.4517
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0838	0.0500	0.7278	2.0800e-003	0.2300	1.2200e-003	0.2312	0.0610	1.1200e-003	0.0621		211.2719	211.2719	5.8500e-003	5.2900e-003	212.9951
Total	**0.4719**	**13.5286**	**3.5819**	**0.0544**	**1.6942**	**0.1302**	**1.8244**	**0.4625**	**0.1245**	**0.5871**		**5,852.1796**	**5,852.1796**	**0.1284**	**0.8962**	**6,122.4467**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1402	0.0000	8.1402	1.2325	0.0000	1.2325			0.0000			0.0000
Off-Road	1.0222	4.4297	45.6865	0.0858		0.1363	0.1363		0.1363	0.1363	0.0000	8,278.8643	8,278.8643	2.3589		8,337.8356
Total	**1.0222**	**4.4297**	**45.6865**	**0.0858**	**8.1402**	**0.1363**	**8.2765**	**1.2325**	**0.1363**	**1.3688**	**0.0000**	**8,278.8643**	**8,278.8643**	**2.3589**		**8,337.8356**

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3881	13.4786	2.8541	0.0524	1.4642	0.1290	1.5932	0.4015	0.1234	0.5249		5,640.9077	5,640.9077	0.1225	0.8909	5,909.4517
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0838	0.0500	0.7278	2.0800e-003	0.2300	1.2200e-003	0.2312	0.0610	1.1200e-003	0.0621		211.2719	211.2719	5.8500e-003	5.2900e-003	212.9951
Total	**0.4719**	**13.5286**	**3.5819**	**0.0544**	**1.6942**	**0.1302**	**1.8244**	**0.4625**	**0.1245**	**0.5871**		**5,852.1796**	**5,852.1796**	**0.1284**	**0.8962**	**6,122.4467**

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.4893	0.0000	18.4893	7.3200	0.0000	7.3200			0.0000			0.0000
Off-Road	7.5722	78.8091	53.8143	0.1340		3.2096	3.2096		2.9528	2.9528		12,978.2832	12,978.2832	4.1974		13,083.2192
Total	**7.5722**	**78.8091**	**53.8143**	**0.1340**	**18.4893**	**3.2096**	**21.6989**	**7.3200**	**2.9528**	**10.2728**		**12,978.2832**	**12,978.2832**	**4.1974**		**13,083.2192**

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4214	14.6355	3.0990	0.0569	1.5899	0.1401	1.7300	0.4360	0.1340	0.5700		6,125.0880	6,125.0880	0.1330	0.9673	6,416.6820
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1048	0.0625	0.9098	2.6000e-003	0.2875	1.5200e-003	0.2890	0.0763	1.4000e-003	0.0777		264.0898	264.0898	7.3200e-003	6.6100e-003	266.2438
Total	**0.5262**	**14.6980**	**4.0088**	**0.0595**	**1.8774**	**0.1416**	**2.0190**	**0.5123**	**0.1354**	**0.6476**		**6,389.1778**	**6,389.1778**	**0.1404**	**0.9740**	**6,682.9258**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.3202	0.0000	8.3202	3.2940	0.0000	3.2940			0.0000			0.0000
Off-Road	1.6434	7.1213	65.3327	0.1340		0.2191	0.2191		0.2191	0.2191	0.0000	12,978.2832	12,978.2832	4.1974		13,083.2192
Total	**1.6434**	**7.1213**	**65.3327**	**0.1340**	**8.3202**	**0.2191**	**8.5393**	**3.2940**	**0.2191**	**3.5131**	**0.0000**	**12,978.2832**	**12,978.2832**	**4.1974**		**13,083.2192**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4214	14.6355	3.0990	0.0569	1.5899	0.1401	1.7300	0.4360	0.1340	0.5700		6,125.0880	6,125.0880	0.1330	0.9673	6,416.6820
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1048	0.0625	0.9098	2.6000e-003	0.2875	1.5200e-003	0.2890	0.0763	1.4000e-003	0.0777		264.0898	264.0898	7.3200e-003	6.6100e-003	266.2438
Total	**0.5262**	**14.6980**	**4.0088**	**0.0595**	**1.8774**	**0.1416**	**2.0190**	**0.5123**	**0.1354**	**0.6476**		**6,389.1778**	**6,389.1778**	**0.1404**	**0.9740**	**6,682.9258**

3.4 Underground Utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8498	15.3008	18.0121	0.0437		0.6583	0.6583		0.6068	0.6068		4,210.9953	4,210.9953	1.3508		4,244.7660
Total	**1.8498**	**15.3008**	**18.0121**	**0.0437**		**0.6583**	**0.6583**		**0.6068**	**0.6068**		**4,210.9953**	**4,210.9953**	**1.3508**		**4,244.7660**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0206	0.5287	0.1513	2.0900e-003	0.0678	5.5600e-003	0.0733	0.0195	5.3100e-003	0.0248		222.5049	222.5049	3.3700e-003	0.0333	232.5223
Worker	0.0539	0.0321	0.4679	1.3400e-003	0.1479	7.8000e-004	0.1487	0.0392	7.2000e-004	0.0399		135.8176	135.8176	3.7600e-003	3.4000e-003	136.9254
Total	**0.0744**	**0.5609**	**0.6192**	**3.4300e-003**	**0.2156**	**6.3400e-003**	**0.2220**	**0.0587**	**6.0300e-003**	**0.0648**		**358.3226**	**358.3226**	**7.1300e-003**	**0.0367**	**369.4477**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5851	2.6490	24.6832	0.0437		0.0845	0.0845		0.0845	0.0845	0.0000	4,210.9953	4,210.9953	1.3508		4,244.7660
Total	**0.5851**	**2.6490**	**24.6832**	**0.0437**		**0.0845**	**0.0845**		**0.0845**	**0.0845**	**0.0000**	**4,210.9953**	**4,210.9953**	**1.3508**		**4,244.7660**

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0206	0.5287	0.1513	2.0900e-003	0.0678	5.5600e-003	0.0733	0.0195	5.3100e-003	0.0248		222.5049	222.5049	3.3700e-003	0.0333	232.5223
Worker	0.0539	0.0321	0.4679	1.3400e-003	0.1479	7.8000e-004	0.1487	0.0392	7.2000e-004	0.0399		135.8176	135.8176	3.7600e-003	3.4000e-003	136.9254
Total	**0.0744**	**0.5609**	**0.6192**	**3.4300e-003**	**0.2156**	**6.3400e-003**	**0.2220**	**0.0587**	**6.0300e-003**	**0.0648**		**358.3226**	**358.3226**	**7.1300e-003**	**0.0367**	**369.4477**

3.4 Underground Utilities - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7466	13.6726	17.8635	0.0437		0.5756	0.5756		0.5307	0.5307		4,213.6576	4,213.6576	1.3517		4,247.4498
Total	**1.7466**	**13.6726**	**17.8635**	**0.0437**		**0.5756**	**0.5756**		**0.5307**	**0.5307**		**4,213.6576**	**4,213.6576**	**1.3517**		**4,247.4498**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.4217	0.1302	2.0000e-003	0.0678	2.6300e-003	0.0704	0.0195	2.5200e-003	0.0220		213.0837	213.0837	2.9200e-003	0.0319	222.6596
Worker	0.0501	0.0285	0.4324	1.2900e-003	0.1479	7.4000e-004	0.1486	0.0392	6.8000e-004	0.0399		132.3399	132.3399	3.3900e-003	3.1600e-003	133.3652
Total	**0.0604**	**0.4502**	**0.5626**	**3.2900e-003**	**0.2156**	**3.3700e-003**	**0.2190**	**0.0587**	**3.2000e-003**	**0.0619**		**345.4236**	**345.4236**	**6.3100e-003**	**0.0351**	**356.0248**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5851	2.6490	24.6831	0.0437		0.0845	0.0845		0.0845	0.0845	0.0000	4,213.6576	4,213.6576	1.3517		4,247.4498
Total	**0.5851**	**2.6490**	**24.6831**	**0.0437**		**0.0845**	**0.0845**		**0.0845**	**0.0845**	**0.0000**	**4,213.6576**	**4,213.6576**	**1.3517**		**4,247.4498**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0104	0.4217	0.1302	2.0000e-003	0.0678	2.6300e-003	0.0704	0.0195	2.5200e-003	0.0220		213.0837	213.0837	2.9200e-003	0.0319	222.6596
Worker	0.0501	0.0285	0.4324	1.2900e-003	0.1479	7.4000e-004	0.1486	0.0392	6.8000e-004	0.0399		132.3399	132.3399	3.3900e-003	3.1600e-003	133.3652
Total	**0.0604**	**0.4502**	**0.5626**	**3.2900e-003**	**0.2156**	**3.3700e-003**	**0.2190**	**0.0587**	**3.2000e-003**	**0.0619**		**345.4236**	**345.4236**	**6.3100e-003**	**0.0351**	**356.0248**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.5527	63.3188	74.6577	0.1330		2.9665	2.9665		2.8893	2.8893		12,542.5289	12,542.5289	1.6946		12,584.8927
Total	**7.5527**	**63.3188**	**74.6577**	**0.1330**		**2.9665**	**2.9665**		**2.8893**	**2.8893**		**12,542.5289**	**12,542.5289**	**1.6946**		**12,584.8927**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0932	3.7951	1.1721	0.0180	0.6100	0.0237	0.6337	0.1756	0.0227	0.1983		1,917.7531	1,917.7531	0.0263	0.2870	2,003.9367
Worker	1.0707	0.6092	9.2485	0.0277	3.1627	0.0159	3.1786	0.8389	0.0146	0.8535		2,830.6039	2,830.6039	0.0726	0.0675	2,852.5332
Total	**1.1639**	**4.4043**	**10.4205**	**0.0456**	**3.7726**	**0.0396**	**3.8122**	**1.0145**	**0.0373**	**1.0518**		**4,748.3570**	**4,748.3570**	**0.0989**	**0.3545**	**4,856.4699**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4163	14.8009	81.6487	0.1330		0.3960	0.3960		0.3960	0.3960	0.0000	12,542.5289	12,542.5289	1.6946		12,584.8927
Total	**2.4163**	**14.8009**	**81.6487**	**0.1330**		**0.3960**	**0.3960**		**0.3960**	**0.3960**	**0.0000**	**12,542.5289**	**12,542.5289**	**1.6946**		**12,584.8927**

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0932	3.7951	1.1721	0.0180	0.6100	0.0237	0.6337	0.1756	0.0227	0.1983		1,917.7531	1,917.7531	0.0263	0.2870	2,003.9367
Worker	1.0707	0.6092	9.2485	0.0277	3.1627	0.0159	3.1786	0.8389	0.0146	0.8535		2,830.6039	2,830.6039	0.0726	0.0675	2,852.5332
Total	**1.1639**	**4.4043**	**10.4205**	**0.0456**	**3.7726**	**0.0396**	**3.8122**	**1.0145**	**0.0373**	**1.0518**		**4,748.3570**	**4,748.3570**	**0.0989**	**0.3545**	**4,856.4699**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.0801	59.3186	74.3260	0.1330		2.5927	2.5927		2.5233	2.5233		12,542.8202	12,542.8202	1.6607		12,584.3376
Total	**7.0801**	**59.3186**	**74.3260**	**0.1330**		**2.5927**	**2.5927**		**2.5233**	**2.5233**		**12,542.8202**	**12,542.8202**	**1.6607**		**12,584.3376**

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0910	3.8101	1.1500	0.0177	0.6100	0.0239	0.6339	0.1756	0.0229	0.1985		1,888.1533	1,888.1533	0.0262	0.2828	1,973.0711
Worker	0.9990	0.5442	8.6168	0.0268	3.1627	0.0151	3.1778	0.8389	0.0139	0.8528		2,760.3764	2,760.3764	0.0657	0.0630	2,780.7788
Total	**1.0900**	**4.3542**	**9.7668**	**0.0445**	**3.7727**	**0.0390**	**3.8117**	**1.0145**	**0.0368**	**1.0513**		**4,648.5297**	**4,648.5297**	**0.0919**	**0.3457**	**4,753.8498**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3418	14.6417	81.5918	0.1330		0.3653	0.3653		0.3653	0.3653	0.0000	12,542.8202	12,542.8202	1.6607		12,584.3376
Total	**2.3418**	**14.6417**	**81.5918**	**0.1330**		**0.3653**	**0.3653**		**0.3653**	**0.3653**	**0.0000**	**12,542.8202**	**12,542.8202**	**1.6607**		**12,584.3376**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0910	3.8101	1.1500	0.0177	0.6100	0.0239	0.6339	0.1756	0.0229	0.1985		1,888.1533	1,888.1533	0.0262	0.2828	1,973.0711
Worker	0.9990	0.5442	8.6168	0.0268	3.1627	0.0151	3.1778	0.8389	0.0139	0.8528		2,760.3764	2,760.3764	0.0657	0.0630	2,780.7788
Total	**1.0900**	**4.3542**	**9.7668**	**0.0445**	**3.7727**	**0.0390**	**3.8117**	**1.0145**	**0.0368**	**1.0513**		**4,648.5297**	**4,648.5297**	**0.0919**	**0.3457**	**4,753.8498**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9568	17.5673	22.9521	0.0437		0.8195	0.8195		0.7562	0.7562		4,191.6583	4,191.6583	1.3335		4,224.9953
Paving	1.2908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.2476**	**17.5673**	**22.9521**	**0.0437**		**0.8195**	**0.8195**		**0.7562**	**0.7562**		**4,191.6583**	**4,191.6583**	**1.3335**		**4,224.9953**

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0523	3.1219	0.7311	0.0147	0.4321	0.0276	0.4597	0.1185	0.0264	0.1449		1,583.6375	1,583.6375	0.0337	0.2502	1,659.0382
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0779	0.0443	0.6726	2.0100e-003	0.2300	1.1500e-003	0.2312	0.0610	1.0600e-003	0.0621		205.8621	205.8621	5.2800e-003	4.9100e-003	207.4570
Total	**0.1302**	**3.1662**	**1.4037**	**0.0167**	**0.6621**	**0.0288**	**0.6908**	**0.1795**	**0.0275**	**0.2070**		**1,789.4996**	**1,789.4996**	**0.0390**	**0.2551**	**1,866.4952**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6356	2.9814	28.5238	0.0437		0.0977	0.0977		0.0977	0.0977	0.0000	4,191.6583	4,191.6583	1.3335		4,224.9953
Paving	1.2908					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.9264**	**2.9814**	**28.5238**	**0.0437**		**0.0977**	**0.0977**		**0.0977**	**0.0977**	**0.0000**	**4,191.6583**	**4,191.6583**	**1.3335**		**4,224.9953**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0523	3.1219	0.7311	0.0147	0.4321	0.0276	0.4597	0.1185	0.0264	0.1449		1,583.6375	1,583.6375	0.0337	0.2502	1,659.0382
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0779	0.0443	0.6726	2.0100e-003	0.2300	1.1500e-003	0.2312	0.0610	1.0600e-003	0.0621		205.8621	205.8621	5.2800e-003	4.9100e-003	207.4570
Total	**0.1302**	**3.1662**	**1.4037**	**0.0167**	**0.6621**	**0.0288**	**0.6908**	**0.1795**	**0.0275**	**0.2070**		**1,789.4996**	**1,789.4996**	**0.0390**	**0.2551**	**1,866.4952**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.7598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**27.9405**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1998	0.1088	1.7234	5.3500e-003	0.6325	3.0200e-003	0.6356	0.1678	2.7800e-003	0.1706		552.0753	552.0753	0.0131	0.0126	556.1558
Total	**0.1998**	**0.1088**	**1.7234**	**5.3500e-003**	**0.6325**	**3.0200e-003**	**0.6356**	**0.1678**	**2.7800e-003**	**0.1706**		**552.0753**	**552.0753**	**0.0131**	**0.0126**	**556.1558**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	27.7598					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**27.7895**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1998	0.1088	1.7234	5.3500e-003	0.6325	3.0200e-003	0.6356	0.1678	2.7800e-003	0.1706		552.0753	552.0753	0.0131	0.0126	556.1558
Total	**0.1998**	**0.1088**	**1.7234**	**5.3500e-003**	**0.6325**	**3.0200e-003**	**0.6356**	**0.1678**	**2.7800e-003**	**0.1706**		**552.0753**	**552.0753**	**0.0131**	**0.0126**	**556.1558**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.0634	4.3582	35.0823	0.0826	8.8730	0.0585	8.9316	2.3632	0.0546	2.4178		8,622.3076	8,622.3076	0.4519	0.3881	8,749.2469
Unmitigated	4.0634	4.3582	35.0823	0.0826	8.8730	0.0585	8.9316	2.3632	0.0546	2.4178		8,622.3076	8,622.3076	0.4519	0.3881	8,749.2469

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	1,012.00	1,012.00	1012.00	2,632,358	2,632,358
Condo/Townhouse High Rise	364.00	364.00	364.00	946,816	946,816
General Office Building	0.00	0.00	0.00		
Other Asphalt Surfaces	202.67	202.67	202.67	538,537	538,537
Strip Mall	34.40	34.40	34.40	95,981	95,981
Total	1,613.07	1,613.07	1,613.07	4,213,692	4,213,692

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	100	0	0
Condo/Townhouse High Rise	10.80	4.80	5.70	31.00	15.00	54.00	100	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	100.00	0.00	100	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Condo/Townhouse High Rise	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
General Office Building	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Other Asphalt Surfaces	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Strip Mall	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1799	1.5377	0.6598	9.8100e-003		0.1243	0.1243		0.1243	0.1243		1,962.0382	1,962.0382	0.0376	0.0360	1,973.6976
NaturalGas Unmitigated	0.1799	1.5377	0.6598	9.8100e-003		0.1243	0.1243		0.1243	0.1243		1,962.0382	1,962.0382	0.0376	0.0360	1,973.6976

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	14437.9	0.1557	1.3306	0.5662	8.4900e-003		0.1076	0.1076		0.1076	0.1076		1,698.5780	1,698.5780	0.0326	0.0311	1,708.6718
Condo/Townhouse High Rise	2104.97	0.0227	0.1940	0.0826	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.6435	247.6435	4.7500e-003	4.5400e-003	249.1151
General Office Building	84.4699	9.1000e-004	8.2800e-003	6.9600e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004		9.9376	9.9376	1.9000e-004	1.8000e-004	9.9967
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	49.9726	5.4000e-004	4.9000e-003	4.1200e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		5.8791	5.8791	1.1000e-004	1.1000e-004	5.9141
Total		**0.1799**	**1.5377**	**0.6598**	**9.8100e-003**		**0.1243**	**0.1243**		**0.1243**	**0.1243**		**1,962.0382**	**1,962.0382**	**0.0376**	**0.0360**	**1,973.6977**

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	14.4379	0.1557	1.3306	0.5662	8.4900e-003		0.1076	0.1076		0.1076	0.1076		1,698.5780	1,698.5780	0.0326	0.0311	1,708.6718
Condo/Townhouse High Rise	2.10497	0.0227	0.1940	0.0826	1.2400e-003		0.0157	0.0157		0.0157	0.0157		247.6435	247.6435	4.7500e-003	4.5400e-003	249.1151
General Office Building	0.0844699	9.1000e-004	8.2800e-003	6.9600e-003	5.0000e-005		6.3000e-004	6.3000e-004		6.3000e-004	6.3000e-004		9.9376	9.9376	1.9000e-004	1.8000e-004	9.9967
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0499726	5.4000e-004	4.9000e-003	4.1200e-003	3.0000e-005		3.7000e-004	3.7000e-004		3.7000e-004	3.7000e-004		5.8791	5.8791	1.1000e-004	1.1000e-004	5.9141
Total		**0.1799**	**1.5377**	**0.6598**	**9.8100e-003**		**0.1243**	**0.1243**		**0.1243**	**0.1243**		**1,962.0382**	**1,962.0382**	**0.0376**	**0.0360**	**1,973.6977**

6.0 Area Detail

6.1 Mitigation Measures Area

IPQ-37 FMC Willow Phase 1 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	14.0243	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574	0.0000	51.1736	51.1736	0.0491	0.0000	52.4017
Unmitigated	14.0243	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574	0.0000	51.1736	51.1736	0.0491	0.0000	52.4017

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9887					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.1812					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8544	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574		51.1736	51.1736	0.0491		52.4017
Total	**14.0243**	**0.3269**	**28.3869**	**1.5000e-003**		**0.1574**	**0.1574**		**0.1574**	**0.1574**	**0.0000**	**51.1736**	**51.1736**	**0.0491**	**0.0000**	**52.4017**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9887					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.1812					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.8544	0.3269	28.3869	1.5000e-003		0.1574	0.1574		0.1574	0.1574		51.1736	51.1736	0.0491		52.4017
Total	**14.0243**	**0.3269**	**28.3869**	**1.5000e-003**		**0.1574**	**0.1574**		**0.1574**	**0.1574**	**0.0000**	**51.1736**	**51.1736**	**0.0491**	**0.0000**	**52.4017**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

IPQ-37 FMC Willow Phase 1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

IPQ-37 FMC Willow Phase 1

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.61	1000sqft	0.00	1,610.00	0
Other Asphalt Surfaces	321.70	1000sqft	7.39	321,700.00	0
Condo/Townhouse	253.00	Dwelling Unit	8.65	479,306.00	724
Condo/Townhouse High Rise	91.00	Dwelling Unit	0.38	78,975.00	260
Strip Mall	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run 5 - Revised site plan: 344 DU Phase 1, add transit station improvements.

Land Use - Condo/townhouse high rise = affordable housing units.
Retail = ground floor mixed use.
General office building = residential common areas in mixed use building.
Parking includes parking lots streets, sidewalks, transit station improvements.

Construction Phase - Construction schedule per project applicant/engineer.
Site Preparation included in grading.
Underground utilites and paving concurrent with building construction.
Architectural coating concurrent with the last 6 months of building construction.

Off-road Equipment -

IPQ-37 FMC Willow Phase 1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Equipment per project applicant/engineer

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 2 dump trucks and 1 water truck.

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 1 dump truck and 1 water truck.

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 1 water truck.

Off-road Equipment - Equipment per project applicant/engineer.
Off-highway Trucks = 1 dump truck and 1 water truck.

Trips and VMT - Vendor trips during Underground Utilites for delivery of supplies and materials.
370 round trips for import of asphalt, aggreagte, and/or concrete during paving.

Demolition - 12,680 tons concrete/ashpalt exported during demolition.

Grading - 77,700 CY soil imported during grading.

Architectural Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Vehicle Trips - Trip generation rates per traffic study (Fehr & Peers 2021).
Future transit station trips applied to parking.
Trip generation acounts for "internalization," all trip purposes set to 100% primary.

Woodstoves - No hearths per project applicant.

Area Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Dust mitigation per BAAQMD BCMMs.
Tier 4 engine mitigation per Mitigation Measure AQ-1.

Energy Mitigation - Per 2019 Title 24 Residential Complinace Manual Eq. 7-1: kW = (CFA X A)/1000 + (DU X B)
kW = (324029 X 0.628)/1000 + (208 X 1.12) = 436.5 kW
kWhr/year = kW X 24 hours X 365 days X 20% = 764,661 kWhr/year

Water Mitigation - Water Mitigation - 20% water conservation per 2019 CalGreen not accounted for in model defaults.

Waste Mitigation - 25% solid waste diversion per AB 341 not accounted for in model defaults.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00

IPQ-37 FMC Willow Phase 1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50
tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	150	100
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	30.00	107.00
tblConstructionPhase	NumDays	300.00	412.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	130.00
tblFireplaces	NumberGas	37.95	0.00
tblFireplaces	NumberGas	13.65	0.00
tblFireplaces	NumberWood	43.01	0.00
tblFireplaces	NumberWood	15.47	0.00
tblGrading	MaterialImported	0.00	77,700.00
tblLandUse	LandUseSquareFeet	253,000.00	479,306.00
tblLandUse	LandUseSquareFeet	91,000.00	78,975.00
tblLandUse	LotAcreage	0.04	0.00
tblLandUse	LotAcreage	15.81	8.65
tblLandUse	LotAcreage	1.42	0.38
tblLandUse	LotAcreage	0.09	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	370.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	8.14	4.00
tblVehicleTrips	ST_TR	4.91	4.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	ST_TR	0.00	0.63
tblVehicleTrips	ST_TR	42.04	8.60
tblVehicleTrips	SU_TR	6.28	4.00
tblVehicleTrips	SU_TR	4.09	4.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	SU_TR	0.00	0.63
tblVehicleTrips	SU_TR	20.43	8.60
tblVehicleTrips	WD_TR	1.32	4.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblVehicleTrips	WD_TR	5.44	4.00
tblVehicleTrips	WD_TR	9.74	0.00
tblVehicleTrips	WD_TR	0.00	0.63
tblVehicleTrips	WD_TR	44.32	8.60
tblWoodstoves	NumberCatalytic	5.06	0.00
tblWoodstoves	NumberCatalytic	1.82	0.00
tblWoodstoves	NumberNoncatalytic	5.06	0.00
tblWoodstoves	NumberNoncatalytic	1.82	0.00

2.0 Emissions Summary

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.5426	6.0413	4.0726	0.0131	1.2419	0.2193	1.4612	0.4442	0.2023	0.6465	0.0000	1,188.3354	1,188.3354	0.2731	0.0547	1,211.4488
2023	1.1369	8.8847	11.1055	0.0241	0.4205	0.3882	0.8087	0.1135	0.3748	0.4883	0.0000	2,118.2003	2,118.2003	0.3024	0.0404	2,137.8032
2024	2.6151	6.2842	8.3225	0.0176	0.3922	0.2594	0.6516	0.1057	0.2525	0.3581	0.0000	1,544.0781	1,544.0781	0.1564	0.0317	1,557.4478
Maximum	**2.6151**	**8.8847**	**11.1055**	**0.0241**	**1.2419**	**0.3882**	**1.4612**	**0.4442**	**0.3748**	**0.6465**	**0.0000**	**2,118.2003**	**2,118.2003**	**0.3024**	**0.0547**	**2,137.8032**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1509	1.4550	5.0116	0.0131	0.6233	0.0247	0.6479	0.2175	0.0243	0.2418	0.0000	1,188.3344	1,188.3344	0.2731	0.0547	1,211.4478
2023	0.4585	2.4562	12.5469	0.0241	0.4205	0.0566	0.4771	0.1135	0.0564	0.1699	0.0000	2,118.1984	2,118.1984	0.3024	0.0404	2,137.8013
2024	2.1456	1.8797	9.0287	0.0176	0.3922	0.0397	0.4319	0.1057	0.0394	0.1451	0.0000	1,544.0767	1,544.0767	0.1564	0.0317	1,557.4464
Maximum	**2.1456**	**2.4562**	**12.5469**	**0.0241**	**0.6233**	**0.0566**	**0.6479**	**0.2175**	**0.0564**	**0.2418**	**0.0000**	**2,118.1984**	**2,118.1984**	**0.3024**	**0.0547**	**2,137.8013**

IPQ-37 FMC Willow Phase 1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**35.85**	**72.70**	**-13.13**	**0.00**	**30.11**	**86.04**	**46.71**	**34.17**	**85.53**	**62.71**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-1-2022**	**6-30-2022**	2.9965	0.7456
2	**7-1-2022**	**9-30-2022**	3.0092	0.7092
3	**10-1-2022**	**12-31-2022**	0.5856	0.1284
4	**1-1-2023**	**3-31-2023**	1.3636	0.3779
5	**4-1-2023**	**6-30-2023**	3.0020	0.8622
6	**7-1-2023**	**9-30-2023**	3.0671	0.8892
7	**10-1-2023**	**12-31-2023**	2.6111	0.7914
8	**1-1-2024**	**3-31-2024**	2.3786	0.7713
9	**4-1-2024**	**6-30-2024**	3.2926	1.6463
10	**7-1-2024**	**9-30-2024**	3.1841	1.5920
		Highest	3.2926	1.6463

IPQ-37 FMC Willow Phase 1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.4804	0.0294	2.5548	1.4000e-004		0.0142	0.0142		0.0142	0.0142	0.0000	4.1782	4.1782	4.0100e-003	0.0000	4.2784
Energy	0.0328	0.2806	0.1204	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	478.6041	478.6041	0.0311	8.9700e-003	482.0549
Mobile	0.6641	0.8595	6.3971	0.0143	1.5548	0.0106	1.5654	0.4154	9.9300e-003	0.4253	0.0000	1,349.6571	1,349.6571	0.0798	0.0672	1,371.6883
Waste						0.0000	0.0000		0.0000	0.0000	33.2783	0.0000	33.2783	1.9667	0.0000	82.4457
Water						0.0000	0.0000		0.0000	0.0000	7.2954	16.2039	23.4993	0.7519	0.0180	47.6646
Total	**3.1773**	**1.1695**	**9.0724**	**0.0162**	**1.5548**	**0.0475**	**1.6023**	**0.4154**	**0.0468**	**0.4621**	**40.5737**	**1,848.6433**	**1,889.2170**	**2.8335**	**0.0942**	**1,988.1319**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.4804	0.0294	2.5548	1.4000e-004		0.0142	0.0142		0.0142	0.0142	0.0000	4.1782	4.1782	4.0100e-003	0.0000	4.2784
Energy	0.0328	0.2806	0.1204	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	407.8548	407.8548	0.0197	7.5800e-003	410.6060
Mobile	0.6641	0.8595	6.3971	0.0143	1.5548	0.0106	1.5654	0.4154	9.9300e-003	0.4253	0.0000	1,349.6571	1,349.6571	0.0798	0.0672	1,371.6883
Waste						0.0000	0.0000		0.0000	0.0000	24.9588	0.0000	24.9588	1.4750	0.0000	61.8343
Water						0.0000	0.0000		0.0000	0.0000	5.8363	12.9631	18.7994	0.6015	0.0144	38.1317
Total	**3.1773**	**1.1695**	**9.0724**	**0.0162**	**1.5548**	**0.0475**	**1.6023**	**0.4154**	**0.0468**	**0.4621**	**30.7951**	**1,774.6532**	**1,805.4482**	**2.1800**	**0.0892**	**1,886.5387**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**24.10**	**4.00**	**4.43**	**23.06**	**5.30**	**5.11**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2022	4/21/2022	5	15	
2	Grading	Grading	4/22/2022	9/19/2022	5	107	
3	Underground Utilities	Trenching	9/20/2022	9/19/2023	5	261	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Building Construction	Building Construction	3/1/2023	9/26/2024	5	412	
5	Paving	Paving	9/20/2023	10/10/2023	5	15	
6	Architectural Coating	Architectural Coating	3/29/2024	9/26/2024	5	130	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 642

Acres of Paving: 7.39

Residential Indoor: 1,130,519; Residential Outdoor: 376,840; Non-Residential Indoor: 8,415; Non-Residential Outdoor: 2,805; Striped Parking Area: 19,302 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	2	8.00	81	0.73
Demolition	Excavators	2	8.00	158	0.38
Demolition	Off-Highway Trucks	3	8.00	402	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	2	8.00	187	0.41
Grading	Off-Highway Trucks	2	8.00	402	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	4	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Underground Utilities	Cement and Mortar Mixers	1	8.00	9	0.56
Underground Utilities	Excavators	2	8.00	158	0.38
Underground Utilities	Off-Highway Trucks	2	8.00	402	0.38
Underground Utilities	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	4	8.00	63	0.31
Building Construction	Air Compressors	6	8.00	78	0.48

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Cranes	4	7.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	8	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Paving	Cement and Mortar Mixers	2	8.00	9	0.56
Paving	Off-Highway Trucks	1	8.00	402	0.38
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	11	28.00	0.00	1,254.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	14	35.00	0.00	9,713.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities	7	18.00	10.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	34	385.00	90.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	11	28.00	0.00	370.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	77.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1357	0.0000	0.1357	0.0205	0.0000	0.0205	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0353	0.3160	0.2667	6.4000e-004		0.0144	0.0144		0.0135	0.0135	0.0000	56.3285	56.3285	0.0161	0.0000	56.7297
Total	**0.0353**	**0.3160**	**0.2667**	**6.4000e-004**	**0.1357**	**0.0144**	**0.1501**	**0.0205**	**0.0135**	**0.0340**	**0.0000**	**56.3285**	**56.3285**	**0.0161**	**0.0000**	**56.7297**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8800e-003	0.1049	0.0216	3.9000e-004	0.0106	9.7000e-004	0.0116	2.9200e-003	9.3000e-004	3.8500e-003	0.0000	38.3870	38.3870	8.3000e-004	6.0600e-003	40.2145
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.3000e-004	5.0500e-003	1.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3432	1.3432	4.0000e-005	4.0000e-005	1.3559
Total	**3.4700e-003**	**0.1053**	**0.0266**	**4.0000e-004**	**0.0123**	**9.8000e-004**	**0.0133**	**3.3600e-003**	**9.4000e-004**	**4.3000e-003**	**0.0000**	**39.7302**	**39.7302**	**8.7000e-004**	**6.1000e-003**	**41.5704**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0611	0.0000	0.0611	9.2400e-003	0.0000	9.2400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.6700e-003	0.0332	0.3427	6.4000e-004		1.0200e-003	1.0200e-003		1.0200e-003	1.0200e-003	0.0000	56.3284	56.3284	0.0161	0.0000	56.7296
Total	**7.6700e-003**	**0.0332**	**0.3427**	**6.4000e-004**	**0.0611**	**1.0200e-003**	**0.0621**	**9.2400e-003**	**1.0200e-003**	**0.0103**	**0.0000**	**56.3284**	**56.3284**	**0.0161**	**0.0000**	**56.7296**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.8800e-003	0.1049	0.0216	3.9000e-004	0.0106	9.7000e-004	0.0116	2.9200e-003	9.3000e-004	3.8500e-003	0.0000	38.3870	38.3870	8.3000e-004	6.0600e-003	40.2145
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.3000e-004	5.0500e-003	1.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3432	1.3432	4.0000e-005	4.0000e-005	1.3559
Total	**3.4700e-003**	**0.1053**	**0.0266**	**4.0000e-004**	**0.0123**	**9.8000e-004**	**0.0133**	**3.3600e-003**	**9.4000e-004**	**4.3000e-003**	**0.0000**	**39.7302**	**39.7302**	**8.7000e-004**	**6.1000e-003**	**41.5704**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.9892	0.0000	0.9892	0.3916	0.0000	0.3916	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4051	4.2163	2.8791	7.1700e-003		0.1717	0.1717		0.1580	0.1580	0.0000	629.8930	629.8930	0.2037	0.0000	634.9860
Total	**0.4051**	**4.2163**	**2.8791**	**7.1700e-003**	**0.9892**	**0.1717**	**1.1609**	**0.3916**	**0.1580**	**0.5496**	**0.0000**	**629.8930**	**629.8930**	**0.2037**	**0.0000**	**634.9860**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0223	0.8121	0.1670	3.0400e-003	0.0823	7.5000e-003	0.0898	0.0227	7.1700e-003	0.0298	0.0000	297.3311	297.3311	6.4400e-003	0.0470	311.4860
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2700e-003	3.7900e-003	0.0450	1.3000e-004	0.0148	8.0000e-005	0.0149	3.9400e-003	7.0000e-005	4.0100e-003	0.0000	11.9769	11.9769	3.8000e-004	3.5000e-004	12.0904
Total	**0.0276**	**0.8159**	**0.2121**	**3.1700e-003**	**0.0971**	**7.5800e-003**	**0.1047**	**0.0266**	**7.2400e-003**	**0.0338**	**0.0000**	**309.3079**	**309.3079**	**6.8200e-003**	**0.0473**	**323.5764**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4451	0.0000	0.4451	0.1762	0.0000	0.1762	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0879	0.3810	3.4953	7.1700e-003		0.0117	0.0117		0.0117	0.0117	0.0000	629.8922	629.8922	0.2037	0.0000	634.9852
Total	**0.0879**	**0.3810**	**3.4953**	**7.1700e-003**	**0.4451**	**0.0117**	**0.4569**	**0.1762**	**0.0117**	**0.1880**	**0.0000**	**629.8922**	**629.8922**	**0.2037**	**0.0000**	**634.9852**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0223	0.8121	0.1670	3.0400e-003	0.0823	7.5000e-003	0.0898	0.0227	7.1700e-003	0.0298	0.0000	297.3311	297.3311	6.4400e-003	0.0470	311.4860
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.2700e-003	3.7900e-003	0.0450	1.3000e-004	0.0148	8.0000e-005	0.0149	3.9400e-003	7.0000e-005	4.0100e-003	0.0000	11.9769	11.9769	3.8000e-004	3.5000e-004	12.0904
Total	**0.0276**	**0.8159**	**0.2121**	**3.1700e-003**	**0.0971**	**7.5800e-003**	**0.1047**	**0.0266**	**7.2400e-003**	**0.0338**	**0.0000**	**309.3079**	**309.3079**	**6.8200e-003**	**0.0473**	**323.5764**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0684	0.5661	0.6665	1.6200e-003		0.0244	0.0244		0.0225	0.0225	0.0000	141.3456	141.3456	0.0453	0.0000	142.4791
Total	**0.0684**	**0.5661**	**0.6665**	**1.6200e-003**		**0.0244**	**0.0244**		**0.0225**	**0.0225**	**0.0000**	**141.3456**	**141.3456**	**0.0453**	**0.0000**	**142.4791**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.5000e-004	0.0203	5.6900e-003	8.0000e-005	2.4300e-003	2.1000e-004	2.6400e-003	7.0000e-004	2.0000e-004	9.0000e-004	0.0000	7.4704	7.4704	1.1000e-004	1.1200e-003	7.8069
Worker	1.8700e-003	1.3500e-003	0.0160	5.0000e-005	5.2700e-003	3.0000e-005	5.2900e-003	1.4000e-003	3.0000e-005	1.4300e-003	0.0000	4.2599	4.2599	1.4000e-004	1.2000e-004	4.3003
Total	**2.6200e-003**	**0.0216**	**0.0217**	**1.3000e-004**	**7.7000e-003**	**2.4000e-004**	**7.9300e-003**	**2.1000e-003**	**2.3000e-004**	**2.3300e-003**	**0.0000**	**11.7303**	**11.7303**	**2.5000e-004**	**1.2400e-003**	**12.1071**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0217	0.0980	0.9133	1.6200e-003		3.1300e-003	3.1300e-003		3.1300e-003	3.1300e-003	0.0000	141.3454	141.3454	0.0453	0.0000	142.4790
Total	**0.0217**	**0.0980**	**0.9133**	**1.6200e-003**		**3.1300e-003**	**3.1300e-003**		**3.1300e-003**	**3.1300e-003**	**0.0000**	**141.3454**	**141.3454**	**0.0453**	**0.0000**	**142.4790**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.5000e-004	0.0203	5.6900e-003	8.0000e-005	2.4300e-003	2.1000e-004	2.6400e-003	7.0000e-004	2.0000e-004	9.0000e-004	0.0000	7.4704	7.4704	1.1000e-004	1.1200e-003	7.8069
Worker	1.8700e-003	1.3500e-003	0.0160	5.0000e-005	5.2700e-003	3.0000e-005	5.2900e-003	1.4000e-003	3.0000e-005	1.4300e-003	0.0000	4.2599	4.2599	1.4000e-004	1.2000e-004	4.3003
Total	**2.6200e-003**	**0.0216**	**0.0217**	**1.3000e-004**	**7.7000e-003**	**2.4000e-004**	**7.9300e-003**	**2.1000e-003**	**2.3000e-004**	**2.3300e-003**	**0.0000**	**11.7303**	**11.7303**	**2.5000e-004**	**1.2400e-003**	**12.1071**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1633	1.2784	1.6702	4.0900e-003		0.0538	0.0538		0.0496	0.0496	0.0000	357.4099	357.4099	0.1147	0.0000	360.2762
Total	**0.1633**	**1.2784**	**1.6702**	**4.0900e-003**		**0.0538**	**0.0538**		**0.0496**	**0.0496**	**0.0000**	**357.4099**	**357.4099**	**0.1147**	**0.0000**	**360.2762**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4000e-004	0.0409	0.0124	1.9000e-004	6.1400e-003	2.5000e-004	6.3900e-003	1.7800e-003	2.4000e-004	2.0100e-003	0.0000	18.0869	18.0869	2.5000e-004	2.7100e-003	18.9001
Worker	4.4000e-003	3.0200e-003	0.0375	1.1000e-004	0.0133	7.0000e-005	0.0134	3.5400e-003	6.0000e-005	3.6000e-003	0.0000	10.4911	10.4911	3.1000e-004	2.9000e-004	10.5856
Total	**5.3400e-003**	**0.0439**	**0.0499**	**3.0000e-004**	**0.0195**	**3.2000e-004**	**0.0198**	**5.3200e-003**	**3.0000e-004**	**5.6100e-003**	**0.0000**	**28.5780**	**28.5780**	**5.6000e-004**	**3.0000e-003**	**29.4857**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Underground Utilities - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0547	0.2477	2.3079	4.0900e-003		7.9000e-003	7.9000e-003		7.9000e-003	7.9000e-003	0.0000	357.4095	357.4095	0.1147	0.0000	360.2758
Total	**0.0547**	**0.2477**	**2.3079**	**4.0900e-003**		**7.9000e-003**	**7.9000e-003**		**7.9000e-003**	**7.9000e-003**	**0.0000**	**357.4095**	**357.4095**	**0.1147**	**0.0000**	**360.2758**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.4000e-004	0.0409	0.0124	1.9000e-004	6.1400e-003	2.5000e-004	6.3900e-003	1.7800e-003	2.4000e-004	2.0100e-003	0.0000	18.0869	18.0869	2.5000e-004	2.7100e-003	18.9001
Worker	4.4000e-003	3.0200e-003	0.0375	1.1000e-004	0.0133	7.0000e-005	0.0134	3.5400e-003	6.0000e-005	3.6000e-003	0.0000	10.4911	10.4911	3.1000e-004	2.9000e-004	10.5856
Total	**5.3400e-003**	**0.0439**	**0.0499**	**3.0000e-004**	**0.0195**	**3.2000e-004**	**0.0198**	**5.3200e-003**	**3.0000e-004**	**5.6100e-003**	**0.0000**	**28.5780**	**28.5780**	**5.6000e-004**	**3.0000e-003**	**29.4857**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.8232	6.9018	8.1377	0.0145		0.3234	0.3234		0.3149	0.3149	0.0000	1,240.2446	1,240.2446	0.1676	0.0000	1,244.4337
Total	**0.8232**	**6.9018**	**8.1377**	**0.0145**		**0.3234**	**0.3234**		**0.3149**	**0.3149**	**0.0000**	**1,240.2446**	**1,240.2446**	**0.1676**	**0.0000**	**1,244.4337**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.9100e-003	0.4290	0.1297	1.9600e-003	0.0644	2.5900e-003	0.0670	0.0186	2.4800e-003	0.0211	0.0000	189.7672	189.7672	2.5900e-003	0.0284	198.2996
Worker	0.1098	0.0753	0.9357	2.8200e-003	0.3318	1.7300e-003	0.3335	0.0883	1.5900e-003	0.0899	0.0000	261.5922	261.5922	7.7000e-003	7.2600e-003	263.9478
Total	**0.1197**	**0.5043**	**1.0653**	**4.7800e-003**	**0.3962**	**4.3200e-003**	**0.4006**	**0.1069**	**4.0700e-003**	**0.1110**	**0.0000**	**451.3593**	**451.3593**	**0.0103**	**0.0357**	**462.2473**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2634	1.6133	8.8997	0.0145		0.0432	0.0432		0.0432	0.0432	0.0000	1,240.2431	1,240.2431	0.1676	0.0000	1,244.4322
Total	**0.2634**	**1.6133**	**8.8997**	**0.0145**		**0.0432**	**0.0432**		**0.0432**	**0.0432**	**0.0000**	**1,240.2431**	**1,240.2431**	**0.1676**	**0.0000**	**1,244.4322**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.9100e-003	0.4290	0.1297	1.9600e-003	0.0644	2.5900e-003	0.0670	0.0186	2.4800e-003	0.0211	0.0000	189.7672	189.7672	2.5900e-003	0.0284	198.2996
Worker	0.1098	0.0753	0.9357	2.8200e-003	0.3318	1.7300e-003	0.3335	0.0883	1.5900e-003	0.0899	0.0000	261.5922	261.5922	7.7000e-003	7.2600e-003	263.9478
Total	**0.1197**	**0.5043**	**1.0653**	**4.7800e-003**	**0.3962**	**4.3200e-003**	**0.4006**	**0.1069**	**4.0700e-003**	**0.1110**	**0.0000**	**451.3593**	**451.3593**	**0.0103**	**0.0357**	**462.2473**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.6868	5.7539	7.2096	0.0129		0.2515	0.2515		0.2448	0.2448	0.0000	1,103.7295	1,103.7295	0.1461	0.0000	1,107.3830
Total	**0.6868**	**5.7539**	**7.2096**	**0.0129**		**0.2515**	**0.2515**		**0.2448**	**0.2448**	**0.0000**	**1,103.7295**	**1,103.7295**	**0.1461**	**0.0000**	**1,107.3830**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6100e-003	0.3832	0.1133	1.7200e-003	0.0574	2.3300e-003	0.0597	0.0166	2.2200e-003	0.0188	0.0000	166.2701	166.2701	2.3000e-003	0.0249	173.7513
Worker	0.0913	0.0599	0.7777	2.4300e-003	0.2953	1.4600e-003	0.2967	0.0786	1.3500e-003	0.0799	0.0000	227.0526	227.0526	6.2200e-003	6.0200e-003	229.0029
Total	**0.0999**	**0.4431**	**0.8910**	**4.1500e-003**	**0.3526**	**3.7900e-003**	**0.3564**	**0.0951**	**3.5700e-003**	**0.0987**	**0.0000**	**393.3227**	**393.3227**	**8.5200e-003**	**0.0309**	**402.7542**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2272	1.4202	7.9144	0.0129		0.0354	0.0354		0.0354	0.0354	0.0000	1,103.7282	1,103.7282	0.1461	0.0000	1,107.3816
Total	**0.2272**	**1.4202**	**7.9144**	**0.0129**		**0.0354**	**0.0354**		**0.0354**	**0.0354**	**0.0000**	**1,103.7282**	**1,103.7282**	**0.1461**	**0.0000**	**1,107.3816**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.6100e-003	0.3832	0.1133	1.7200e-003	0.0574	2.3300e-003	0.0597	0.0166	2.2200e-003	0.0188	0.0000	166.2701	166.2701	2.3000e-003	0.0249	173.7513
Worker	0.0913	0.0599	0.7777	2.4300e-003	0.2953	1.4600e-003	0.2967	0.0786	1.3500e-003	0.0799	0.0000	227.0526	227.0526	6.2200e-003	6.0200e-003	229.0029
Total	**0.0999**	**0.4431**	**0.8910**	**4.1500e-003**	**0.3526**	**3.7900e-003**	**0.3564**	**0.0951**	**3.5700e-003**	**0.0987**	**0.0000**	**393.3227**	**393.3227**	**8.5200e-003**	**0.0309**	**402.7542**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0147	0.1318	0.1721	3.3000e-004		6.1500e-003	6.1500e-003		5.6700e-003	5.6700e-003	0.0000	28.5196	28.5196	9.0700e-003	0.0000	28.7464
Paving	9.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0244**	**0.1318**	**0.1721**	**3.3000e-004**		**6.1500e-003**	**6.1500e-003**		**5.6700e-003**	**5.6700e-003**	**0.0000**	**28.5196**	**28.5196**	**9.0700e-003**	**0.0000**	**28.7464**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8000e-004	0.0243	5.5200e-003	1.1000e-004	3.1300e-003	2.1000e-004	3.3400e-003	8.6000e-004	2.0000e-004	1.0600e-003	0.0000	10.7799	10.7799	2.3000e-004	1.7000e-003	11.2931
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.6800e-003	1.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3091	1.3091	4.0000e-005	4.0000e-005	1.3208
Total	**9.3000e-004**	**0.0247**	**0.0102**	**1.2000e-004**	**4.7900e-003**	**2.2000e-004**	**5.0100e-003**	**1.3000e-003**	**2.1000e-004**	**1.5100e-003**	**0.0000**	**12.0889**	**12.0889**	**2.7000e-004**	**1.7400e-003**	**12.6139**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.7700e-003	0.0224	0.2139	3.3000e-004		7.3000e-004	7.3000e-004		7.3000e-004	7.3000e-004	0.0000	28.5195	28.5195	9.0700e-003	0.0000	28.7464
Paving	9.6800e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0145**	**0.0224**	**0.2139**	**3.3000e-004**		**7.3000e-004**	**7.3000e-004**		**7.3000e-004**	**7.3000e-004**	**0.0000**	**28.5195**	**28.5195**	**9.0700e-003**	**0.0000**	**28.7464**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.8000e-004	0.0243	5.5200e-003	1.1000e-004	3.1300e-003	2.1000e-004	3.3400e-003	8.6000e-004	2.0000e-004	1.0600e-003	0.0000	10.7799	10.7799	2.3000e-004	1.7000e-003	11.2931
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.6800e-003	1.0000e-005	1.6600e-003	1.0000e-005	1.6700e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3091	1.3091	4.0000e-005	4.0000e-005	1.3208
Total	**9.3000e-004**	**0.0247**	**0.0102**	**1.2000e-004**	**4.7900e-003**	**2.2000e-004**	**5.0100e-003**	**1.3000e-003**	**2.1000e-004**	**1.5100e-003**	**0.0000**	**12.0889**	**12.0889**	**2.7000e-004**	**1.7400e-003**	**12.6139**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8044					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0118	0.0792	0.1177	1.9000e-004		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	16.5962	16.5962	9.3000e-004	0.0000	16.6195
Total	**1.8161**	**0.0792**	**0.1177**	**1.9000e-004**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**16.5962**	**16.5962**	**9.3000e-004**	**0.0000**	**16.6195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0122	8.0200e-003	0.1042	3.3000e-004	0.0396	2.0000e-004	0.0398	0.0105	1.8000e-004	0.0107	0.0000	30.4297	30.4297	8.3000e-004	8.1000e-004	30.6911
Total	**0.0122**	**8.0200e-003**	**0.1042**	**3.3000e-004**	**0.0396**	**2.0000e-004**	**0.0398**	**0.0105**	**1.8000e-004**	**0.0107**	**0.0000**	**30.4297**	**30.4297**	**8.3000e-004**	**8.1000e-004**	**30.6911**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8044					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9300e-003	8.3700e-003	0.1191	1.9000e-004		2.6000e-004	2.6000e-004		2.6000e-004	2.6000e-004	0.0000	16.5961	16.5961	9.3000e-004	0.0000	16.6195
Total	**1.8063**	**8.3700e-003**	**0.1191**	**1.9000e-004**		**2.6000e-004**	**2.6000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**16.5961**	**16.5961**	**9.3000e-004**	**0.0000**	**16.6195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0122	8.0200e-003	0.1042	3.3000e-004	0.0396	2.0000e-004	0.0398	0.0105	1.8000e-004	0.0107	0.0000	30.4297	30.4297	8.3000e-004	8.1000e-004	30.6911
Total	**0.0122**	**8.0200e-003**	**0.1042**	**3.3000e-004**	**0.0396**	**2.0000e-004**	**0.0398**	**0.0105**	**1.8000e-004**	**0.0107**	**0.0000**	**30.4297**	**30.4297**	**8.3000e-004**	**8.1000e-004**	**30.6911**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6641	0.8595	6.3971	0.0143	1.5548	0.0106	1.5654	0.4154	9.9300e-003	0.4253	0.0000	1,349.6571	1,349.6571	0.0798	0.0672	1,371.6883
Unmitigated	0.6641	0.8595	6.3971	0.0143	1.5548	0.0106	1.5654	0.4154	9.9300e-003	0.4253	0.0000	1,349.6571	1,349.6571	0.0798	0.0672	1,371.6883

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	1,012.00	1,012.00	1012.00	2,632,358	2,632,358
Condo/Townhouse High Rise	364.00	364.00	364.00	946,816	946,816
General Office Building	0.00	0.00	0.00		
Other Asphalt Surfaces	202.67	202.67	202.67	538,537	538,537
Strip Mall	34.40	34.40	34.40	95,981	95,981
Total	1,613.07	1,613.07	1,613.07	4,213,692	4,213,692

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	100	0	0
Condo/Townhouse High Rise	10.80	4.80	5.70	31.00	15.00	54.00	100	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	100.00	0.00	100	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Condo/Townhouse High Rise	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
General Office Building	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Other Asphalt Surfaces	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Strip Mall	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

IPQ-37 FMC Willow Phase 1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.0174	83.0174	0.0134	1.6300e-003	83.8383
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	153.7667	153.7667	0.0249	3.0200e-003	155.2872
NaturalGas Mitigated	0.0328	0.2806	0.1204	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	324.8374	324.8374	6.2300e-003	5.9600e-003	326.7678
NaturalGas Unmitigated	0.0328	0.2806	0.1204	1.7900e-003		0.0227	0.0227		0.0227	0.0227	0.0000	324.8374	324.8374	6.2300e-003	5.9600e-003	326.7678

IPQ-37 FMC Willow Phase 1 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	5.26984e+006	0.0284	0.2428	0.1033	1.5500e-003		0.0196	0.0196		0.0196	0.0196	0.0000	281.2186	281.2186	5.3900e-003	5.1600e-003	282.8898
Condo/Townhouse High Rise	768314	4.1400e-003	0.0354	0.0151	2.3000e-004		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.0000	41.0002	41.0002	7.9000e-004	7.5000e-004	41.2438
General Office Building	30831.5	1.7000e-004	1.5100e-003	1.2700e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6453	1.6453	3.0000e-005	3.0000e-005	1.6551
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	18240	1.0000e-004	8.9000e-004	7.5000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9734	0.9734	2.0000e-005	2.0000e-005	0.9791
Total		**0.0328**	**0.2806**	**0.1204**	**1.8000e-003**		**0.0227**	**0.0227**		**0.0227**	**0.0227**	**0.0000**	**324.8375**	**324.8375**	**6.2300e-003**	**5.9600e-003**	**326.7678**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	5.26984e+006	0.0284	0.2428	0.1033	1.5500e-003		0.0196	0.0196		0.0196	0.0196	0.0000	281.2186	281.2186	5.3900e-003	5.1600e-003	282.8898
Condo/Townhouse High Rise	768314	4.1400e-003	0.0354	0.0151	2.3000e-004		2.8600e-003	2.8600e-003		2.8600e-003	2.8600e-003	0.0000	41.0002	41.0002	7.9000e-004	7.5000e-004	41.2438
General Office Building	30831.5	1.7000e-004	1.5100e-003	1.2700e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6453	1.6453	3.0000e-005	3.0000e-005	1.6551
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	18240	1.0000e-004	8.9000e-004	7.5000e-004	1.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	0.9734	0.9734	2.0000e-005	2.0000e-005	0.9791
Total		**0.0328**	**0.2806**	**0.1204**	**1.8000e-003**		**0.0227**	**0.0227**		**0.0227**	**0.0227**	**0.0000**	**324.8375**	**324.8375**	**6.2300e-003**	**5.9600e-003**	**326.7678**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	1.22428e+006	113.2752	0.0183	2.2200e-003	114.3953
Condo/Townhouse High Rise	377289	34.9082	5.6500e-003	6.8000e-004	35.2534
General Office Building	19384.4	1.7935	2.9000e-004	4.0000e-005	1.8113
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	40960	3.7898	6.1000e-004	7.0000e-005	3.8273
Total		**153.7667**	**0.0249**	**3.0100e-003**	**155.2872**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	1.07135e+006	99.1253	0.0160	1.9400e-003	100.1055
Condo/Townhouse High Rise	224357	20.7583	3.3600e-003	4.1000e-004	20.9636
General Office Building	-133548	-12.3564	-0.0020	-0.0002	-12.4785
Other Asphalt Surfaces	-152932	-14.1499	-0.0023	-0.0003	-14.2898
Strip Mall	-111972	-10.3601	-0.0017	-0.0002	-10.4625
Total		**83.0174**	**0.0134**	**1.6300e-003**	**83.8383**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.4804	0.0294	2.5548	1.4000e-004		0.0142	0.0142		0.0142	0.0142	0.0000	4.1782	4.1782	4.0100e-003	0.0000	4.2784
Unmitigated	2.4804	0.0294	2.5548	1.4000e-004		0.0142	0.0142		0.0142	0.0142	0.0000	4.1782	4.1782	4.0100e-003	0.0000	4.2784

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1804					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2231					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0769	0.0294	2.5548	1.4000e-004		0.0142	0.0142		0.0142	0.0142	0.0000	4.1782	4.1782	4.0100e-003	0.0000	4.2784
Total	**2.4804**	**0.0294**	**2.5548**	**1.4000e-004**		**0.0142**	**0.0142**		**0.0142**	**0.0142**	**0.0000**	**4.1782**	**4.1782**	**4.0100e-003**	**0.0000**	**4.2784**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1804					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2231					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0769	0.0294	2.5548	1.4000e-004		0.0142	0.0142		0.0142	0.0142	0.0000	4.1782	4.1782	4.0100e-003	0.0000	4.2784
Total	**2.4804**	**0.0294**	**2.5548**	**1.4000e-004**		**0.0142**	**0.0142**		**0.0142**	**0.0142**	**0.0000**	**4.1782**	**4.1782**	**4.0100e-003**	**0.0000**	**4.2784**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	18.7994	0.6015	0.0144	38.1317
Unmitigated	23.4993	0.7519	0.0180	47.6646

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	16.484 / 10.3921	16.8475	0.5390	0.0129	34.1702
Condo/Townhouse High Rise	5.92902 / 3.73786	6.0598	0.1939	4.6400e-003	12.2905
General Office Building	0.286151 / 0.175383	0.2908	9.3600e-003	2.2000e-004	0.5915
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.29629 / 0.181597	0.3011	9.6900e-003	2.3000e-004	0.6125
Total		**23.4993**	**0.7519**	**0.0180**	**47.6646**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	13.1872 / 8.31365	13.4780	0.4312	0.0103	27.3361
Condo/Townhouse High Rise	4.74321 / 2.99029	4.8478	0.1551	3.7100e-003	9.8324
General Office Building	0.228921 / 0.140306	0.2327	7.4900e-003	1.8000e-004	0.4732
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.237032 / 0.145278	0.2409	7.7500e-003	1.9000e-004	0.4900
Total		**18.7994**	**0.6016**	**0.0144**	**38.1317**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	24.9588	1.4750	0.0000	61.8343
Unmitigated	33.2783	1.9667	0.0000	82.4457

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	116.38	23.6241	1.3961	0.0000	58.5277
Condo/Townhouse High Rise	41.86	8.4972	0.5022	0.0000	21.0515
General Office Building	1.5	0.3045	0.0180	0.0000	0.7544
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	4.2	0.8526	0.0504	0.0000	2.1122
Total		**33.2783**	**1.9667**	**0.0000**	**82.4457**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	87.285	17.7181	1.0471	0.0000	43.8958
Condo/Townhouse High Rise	31.395	6.3729	0.3766	0.0000	15.7886
General Office Building	1.125	0.2284	0.0135	0.0000	0.5658
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	3.15	0.6394	0.0378	0.0000	1.5841
Total		**24.9588**	**1.4750**	**0.0000**	**61.8343**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

IPQ-37 FMC Willow Phase 2 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

IPQ-37 FMC Willow Phase 2

Alameda County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	14.00	1000sqft	0.32	14,000.00	0
City Park	5.00	Acre	5.00	217,800.00	0
Condo/Townhouse	26.00	Dwelling Unit	0.68	51,409.00	74

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run 5 - Revised site plan: 26 DU Phase 2, add Grand Park. Underground utilities and grading moved to Phase 1.
Construcion models only remaining building constructiona and architecitural coating after buildout of Phase 1.

Land Use - Parking includes parking lots streets and sidewalks.

Construction Phase - Construction schedule per project applicant/engineer.
Architectural coating concurrent with building construction.

Off-road Equipment - Construction equipment per project applicant/engineer.

Off-road Equipment - Construction equipment per project applicant/engineer.

Off-road Equipment - Construction equipment per project applicant/engineer.
Off-Highway Truck = water truck.

Trips and VMT -

Grading -

IPQ-37 FMC Willow Phase 2 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Vehicle Trips - Trip generation rates per traffic study (Fehr & Peers 2021).
Residential trip rates account for "internalization", trip purpose set to 100% primary.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust -

Woodstoves - No hearths per project applicant.

Consumer Products -

Area Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Landscape Equipment -

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Dust mitigation per BAAQMD BCMMs.
Tier 4 engine mitigation per Mitigation Measure AQ-1.

Area Mitigation - CalEEMod error, defaults correct.

Energy Mitigation - Per 2019 Title 24 Residential Complinace Manual Eq. 7-1: kW = (CFA X A)/1000 + (DU X B)
kW = (41,009 X 0.628)/1000 + (26 X 1.12) = 55 kW
kWhr/year = kW X 24 hours X 365 days X 20% = 96,139 kWhr/year.

Water Mitigation - 20% water conservation per 2019 CalGreen not acconted for in model defaults.

Waste Mitigation - 25% solid waste diversion per AB 341 not accounted for in model defaults.

Fleet Mix - CalEEMod error, defaults correct.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50

IPQ-37 FMC Willow Phase 2 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	150	100
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	230.00	23.00
tblConstructionPhase	PhaseEndDate	9/15/2025	10/31/2024
tblConstructionPhase	PhaseEndDate	8/18/2025	10/31/2024
tblConstructionPhase	PhaseStartDate	8/19/2025	10/1/2024
tblFireplaces	NumberGas	3.90	0.00
tblFireplaces	NumberWood	4.42	0.00
tblLandUse	LandUseSquareFeet	26,000.00	51,409.00
tblLandUse	LotAcreage	1.63	0.68
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	1.96	2.40
tblVehicleTrips	ST_TR	8.14	4.00
tblVehicleTrips	SU_TR	2.19	2.40
tblVehicleTrips	SU_TR	6.28	4.00
tblVehicleTrips	WD_TR	0.78	2.40
tblVehicleTrips	WD_TR	7.32	4.00
tblWoodstoves	NumberCatalytic	0.52	0.00
tblWoodstoves	NumberNoncatalytic	0.52	0.00

2.0 Emissions Summary

IPQ-37 FMC Willow Phase 2 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	21.9241	62.6202	79.6778	0.1530	1.4197	2.6700	4.0897	0.3829	2.5997	2.9826	0.0000	14,611.1822	14,611.1822	1.7156	0.1554	14,700.3830
Maximum	**21.9241**	**62.6202**	**79.6778**	**0.1530**	**1.4197**	**2.6700**	**4.0897**	**0.3829**	**2.5997**	**2.9826**	**0.0000**	**14,611.1822**	**14,611.1822**	**1.7156**	**0.1554**	**14,700.3830**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	17.0348	16.8532	86.9658	0.1530	1.4197	0.3856	1.8054	0.3829	0.3847	0.7676	0.0000	14,611.1821	14,611.1821	1.7156	0.1554	14,700.3830
Maximum	**17.0348**	**16.8532**	**86.9658**	**0.1530**	**1.4197**	**0.3856**	**1.8054**	**0.3829**	**0.3847**	**0.7676**	**0.0000**	**14,611.1821**	**14,611.1821**	**1.7156**	**0.1554**	**14,700.3830**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**22.30**	**73.09**	**-9.15**	**0.00**	**0.00**	**85.56**	**55.86**	**0.00**	**85.20**	**74.26**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2814	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.8665	3.8665	3.7100e-003	0.0000	3.9593
Energy	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947
Mobile	0.2595	0.3521	2.6510	5.4900e-003	0.6236	4.1300e-003	0.6277	0.1661	3.8500e-003	0.1699		572.8636	572.8636	0.0362	0.0298	582.6550
Total	**1.5569**	**0.5135**	**4.8541**	**6.4700e-003**	**0.6236**	**0.0271**	**0.6507**	**0.1661**	**0.0268**	**0.1929**	**0.0000**	**751.2875**	**751.2875**	**0.0433**	**0.0330**	**762.2090**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2814	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.8665	3.8665	3.7100e-003	0.0000	3.9593
Energy	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947
Mobile	0.2595	0.3521	2.6510	5.4900e-003	0.6236	4.1300e-003	0.6277	0.1661	3.8500e-003	0.1699		572.8636	572.8636	0.0362	0.0298	582.6550
Total	**1.5569**	**0.5135**	**4.8541**	**6.4700e-003**	**0.6236**	**0.0271**	**0.6507**	**0.1661**	**0.0268**	**0.1929**	**0.0000**	**751.2875**	**751.2875**	**0.0433**	**0.0330**	**762.2090**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	10/1/2024	10/31/2024	5	23	
2	Architectural Coating	Architectural Coating	10/1/2024	10/31/2024	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.32

Residential Indoor: 104,103; Residential Outdoor: 34,701; Non-Residential Indoor: 750; Non-Residential Outdoor: 250; Striped Parking Area: 840 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Aerial Lifts	4	8.00	63	0.31
Building Construction	Air Compressors	8	8.00	78	0.48
Building Construction	Cranes	4	7.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	8	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

IPQ-37 FMC Willow Phase 2 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	34	116.00	41.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.0801	59.3186	74.3260	0.1330		2.5927	2.5927		2.5233	2.5233		12,542.8202	12,542.8202	1.6607		12,584.3376
Total	**7.0801**	**59.3186**	**74.3260**	**0.1330**		**2.5927**	**2.5927**		**2.5233**	**2.5233**		**12,542.8202**	**12,542.8202**	**1.6607**		**12,584.3376**

IPQ-37 FMC Willow Phase 2 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0395	1.8389	0.5414	8.0700e-003	0.2779	0.0109	0.2888	0.0800	0.0105	0.0905		861.6213	861.6213	0.0118	0.1291	900.4001
Worker	0.3069	0.2036	2.5038	7.4900e-003	0.9529	4.5500e-003	0.9575	0.2528	4.1900e-003	0.2570		772.1866	772.1866	0.0227	0.0219	779.2872
Total	**0.3464**	**2.0424**	**3.0452**	**0.0156**	**1.2308**	**0.0155**	**1.2463**	**0.3328**	**0.0147**	**0.3474**		**1,633.8080**	**1,633.8080**	**0.0345**	**0.1511**	**1,679.6873**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3418	14.6417	81.5918	0.1330		0.3653	0.3653		0.3653	0.3653	0.0000	12,542.8202	12,542.8202	1.6607		12,584.3376
Total	**2.3418**	**14.6417**	**81.5918**	**0.1330**		**0.3653**	**0.3653**		**0.3653**	**0.3653**	**0.0000**	**12,542.8202**	**12,542.8202**	**1.6607**		**12,584.3376**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0395	1.8389	0.5414	8.0700e-003	0.2779	0.0109	0.2888	0.0800	0.0105	0.0905		861.6213	861.6213	0.0118	0.1291	900.4001
Worker	0.3069	0.2036	2.5038	7.4900e-003	0.9529	4.5500e-003	0.9575	0.2528	4.1900e-003	0.2570		772.1866	772.1866	0.0227	0.0219	779.2872
Total	**0.3464**	**2.0424**	**3.0452**	**0.0156**	**1.2308**	**0.0155**	**1.2463**	**0.3328**	**0.0147**	**0.3474**		**1,633.8080**	**1,633.8080**	**0.0345**	**0.1511**	**1,679.6873**

3.3 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.2561					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**14.4368**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0609	0.0404	0.4964	1.4800e-003	0.1889	9.0000e-004	0.1898	0.0501	8.3000e-004	0.0510		153.1060	153.1060	4.5000e-003	4.3500e-003	154.5138
Total	**0.0609**	**0.0404**	**0.4964**	**1.4800e-003**	**0.1889**	**9.0000e-004**	**0.1898**	**0.0501**	**8.3000e-004**	**0.0510**		**153.1060**	**153.1060**	**4.5000e-003**	**4.3500e-003**	**154.5138**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.2561					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**14.2858**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0609	0.0404	0.4964	1.4800e-003	0.1889	9.0000e-004	0.1898	0.0501	8.3000e-004	0.0510		153.1060	153.1060	4.5000e-003	4.3500e-003	154.5138
Total	**0.0609**	**0.0404**	**0.4964**	**1.4800e-003**	**0.1889**	**9.0000e-004**	**0.1898**	**0.0501**	**8.3000e-004**	**0.0510**		**153.1060**	**153.1060**	**4.5000e-003**	**4.3500e-003**	**154.5138**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

IPQ-37 FMC Willow Phase 2 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2595	0.3521	2.6510	5.4900e-003	0.6236	4.1300e-003	0.6277	0.1661	3.8500e-003	0.1699		572.8636	572.8636	0.0362	0.0298	582.6550
Unmitigated	0.2595	0.3521	2.6510	5.4900e-003	0.6236	4.1300e-003	0.6277	0.1661	3.8500e-003	0.1699		572.8636	572.8636	0.0362	0.0298	582.6550

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	12.00	12.00	12.00	25,618	25,618
Condo/Townhouse	104.00	104.00	104.00	270,519	270,519
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	116.00	116.00	116.00	296,137	296,137

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	100	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Condo/Townhouse	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Other Asphalt Surfaces	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947
NaturalGas Unmitigated	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1483.74	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0160**	**0.1367**	**0.0582**	**8.7000e-004**		**0.0111**	**0.0111**		**0.0111**	**0.0111**		**174.5574**	**174.5574**	**3.3500e-003**	**3.2000e-003**	**175.5947**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.48374	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0160**	**0.1367**	**0.0582**	**8.7000e-004**		**0.0111**	**0.0111**		**0.0111**	**0.0111**		**174.5574**	**174.5574**	**3.3500e-003**	**3.2000e-003**	**175.5947**

6.0 Area Detail

6.1 Mitigation Measures Area

IPQ-37 FMC Willow Phase 2 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2814	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.8665	3.8665	3.7100e-003	0.0000	3.9593
Unmitigated	1.2814	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.8665	3.8665	3.7100e-003	0.0000	3.9593

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1270					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0645	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119		3.8665	3.8665	3.7100e-003		3.9593
Total	**1.2814**	**0.0247**	**2.1449**	**1.1000e-004**		**0.0119**	**0.0119**		**0.0119**	**0.0119**	**0.0000**	**3.8665**	**3.8665**	**3.7100e-003**	**0.0000**	**3.9593**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1270					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0645	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119		3.8665	3.8665	3.7100e-003		3.9593
Total	**1.2814**	**0.0247**	**2.1449**	**1.1000e-004**		**0.0119**	**0.0119**		**0.0119**	**0.0119**	**0.0000**	**3.8665**	**3.8665**	**3.7100e-003**	**0.0000**	**3.9593**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

IPQ-37 FMC Willow Phase 2 - Alameda County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

IPQ-37 FMC Willow Phase 2 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

IPQ-37 FMC Willow Phase 2

Alameda County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	14.00	1000sqft	0.32	14,000.00	0
City Park	5.00	Acre	5.00	217,800.00	0
Condo/Townhouse	26.00	Dwelling Unit	0.68	51,409.00	74

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run 5 - Revised site plan: 26 DU Phase 2, add Grand Park. Underground utilities and grading moved to Phase 1.
Construcion models only remaining building constructiona and architecitural coating after buildout of Phase 1.

Land Use - Parking includes parking lots streets and sidewalks.

Construction Phase - Construction schedule per project applicant/engineer.
Architectural coating concurrent with building construction.

Off-road Equipment - Construction equipment per project applicant/engineer.

Off-road Equipment - Construction equipment per project applicant/engineer.

Off-road Equipment - Construction equipment per project applicant/engineer.
Off-Highway Truck = water truck.

Trips and VMT -

Grading -

IPQ-37 FMC Willow Phase 2 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Vehicle Trips - Trip generation rates per traffic study (Fehr & Peers 2021).
Residential trip rates account for "internalization", trip purpose set to 100% primary.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust -

Woodstoves - No hearths per project applicant.

Consumer Products -

Area Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Landscape Equipment -

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Dust mitigation per BAAQMD BCMMs.
Tier 4 engine mitigation per Mitigation Measure AQ-1.

Area Mitigation - CalEEMod error, defaults correct.

Energy Mitigation - Per 2019 Title 24 Residential Complinace Manual Eq. 7-1: kW = (CFA X A)/1000 + (DU X B)
kW = (41,009 X 0.628)/1000 + (26 X 1.12) = 55 kW
kWhr/year = kW X 24 hours X 365 days X 20% = 96,139 kWhr/year.

Water Mitigation - 20% water conservation per 2019 CalGreen not acconted for in model defaults.

Waste Mitigation - 25% solid waste diversion per AB 341 not accounted for in model defaults.

Fleet Mix - CalEEMod error, defaults correct.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50

IPQ-37 FMC Willow Phase 2 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	150	100
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	230.00	23.00
tblConstructionPhase	PhaseEndDate	9/15/2025	10/31/2024
tblConstructionPhase	PhaseEndDate	8/18/2025	10/31/2024
tblConstructionPhase	PhaseStartDate	8/19/2025	10/1/2024
tblFireplaces	NumberGas	3.90	0.00
tblFireplaces	NumberWood	4.42	0.00
tblLandUse	LandUseSquareFeet	26,000.00	51,409.00
tblLandUse	LotAcreage	1.63	0.68
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00

IPQ-37 FMC Willow Phase 2 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	1.96	2.40
tblVehicleTrips	ST_TR	8.14	4.00
tblVehicleTrips	SU_TR	2.19	2.40
tblVehicleTrips	SU_TR	6.28	4.00
tblVehicleTrips	WD_TR	0.78	2.40
tblVehicleTrips	WD_TR	7.32	4.00
tblWoodstoves	NumberCatalytic	0.52	0.00
tblWoodstoves	NumberNoncatalytic	0.52	0.00

2.0 Emissions Summary

IPQ-37 FMC Willow Phase 2 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	21.9190	62.4696	79.7710	0.1537	1.4197	2.6699	4.0897	0.3829	2.5996	2.9825	0.0000	14,681.0304	14,681.0304	1.7122	0.1515	14,768.9948
Maximum	**21.9190**	**62.4696**	**79.7710**	**0.1537**	**1.4197**	**2.6699**	**4.0897**	**0.3829**	**2.5996**	**2.9825**	**0.0000**	**14,681.0304**	**14,681.0304**	**1.7122**	**0.1515**	**14,768.9948**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	17.0297	16.7026	87.0591	0.1537	1.4197	0.3856	1.8053	0.3829	0.3847	0.7676	0.0000	14,681.0304	14,681.0304	1.7122	0.1515	14,768.9948
Maximum	**17.0297**	**16.7026**	**87.0591**	**0.1537**	**1.4197**	**0.3856**	**1.8053**	**0.3829**	**0.3847**	**0.7676**	**0.0000**	**14,681.0304**	**14,681.0304**	**1.7122**	**0.1515**	**14,768.9948**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**22.31**	**73.26**	**-9.14**	**0.00**	**0.00**	**85.56**	**55.86**	**0.00**	**85.20**	**74.26**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

IPQ-37 FMC Willow Phase 2 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2814	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.8665	3.8665	3.7100e-003	0.0000	3.9593
Energy	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947
Mobile	0.2895	0.3081	2.4769	5.8100e-003	0.6236	4.1200e-003	0.6277	0.1661	3.8500e-003	0.1699		606.3737	606.3737	0.0320	0.0274	615.3440
Total	**1.5869**	**0.4695**	**4.6801**	**6.7900e-003**	**0.6236**	**0.0271**	**0.6507**	**0.1661**	**0.0268**	**0.1929**	**0.0000**	**784.7977**	**784.7977**	**0.0391**	**0.0306**	**794.8980**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.2814	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.8665	3.8665	3.7100e-003	0.0000	3.9593
Energy	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947
Mobile	0.2895	0.3081	2.4769	5.8100e-003	0.6236	4.1200e-003	0.6277	0.1661	3.8500e-003	0.1699		606.3737	606.3737	0.0320	0.0274	615.3440
Total	**1.5869**	**0.4695**	**4.6801**	**6.7900e-003**	**0.6236**	**0.0271**	**0.6507**	**0.1661**	**0.0268**	**0.1929**	**0.0000**	**784.7977**	**784.7977**	**0.0391**	**0.0306**	**794.8980**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	10/1/2024	10/31/2024	5	23	
2	Architectural Coating	Architectural Coating	10/1/2024	10/31/2024	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.32

Residential Indoor: 104,103; Residential Outdoor: 34,701; Non-Residential Indoor: 750; Non-Residential Outdoor: 250; Striped Parking Area: 840 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Aerial Lifts	4	8.00	63	0.31
Building Construction	Air Compressors	8	8.00	78	0.48
Building Construction	Cranes	4	7.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	8	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

IPQ-37 FMC Willow Phase 2 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	34	116.00	41.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	7.0801	59.3186	74.3260	0.1330		2.5927	2.5927		2.5233	2.5233		12,542.8202	12,542.8202	1.6607		12,584.3376
Total	**7.0801**	**59.3186**	**74.3260**	**0.1330**		**2.5927**	**2.5927**		**2.5233**	**2.5233**		**12,542.8202**	**12,542.8202**	**1.6607**		**12,584.3376**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0415	1.7357	0.5239	8.0600e-003	0.2779	0.0109	0.2888	0.0800	0.0104	0.0904		860.1587	860.1587	0.0119	0.1288	898.8435
Worker	0.3010	0.1640	2.5962	8.0600e-003	0.9529	4.5500e-003	0.9575	0.2528	4.1900e-003	0.2570		831.6978	831.6978	0.0198	0.0190	837.8450
Total	**0.3425**	**1.8997**	**3.1201**	**0.0161**	**1.2308**	**0.0155**	**1.2463**	**0.3328**	**0.0146**	**0.3474**		**1,691.8565**	**1,691.8565**	**0.0317**	**0.1478**	**1,736.6885**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3418	14.6417	81.5918	0.1330		0.3653	0.3653		0.3653	0.3653	0.0000	12,542.8202	12,542.8202	1.6607		12,584.3376
Total	**2.3418**	**14.6417**	**81.5918**	**0.1330**		**0.3653**	**0.3653**		**0.3653**	**0.3653**	**0.0000**	**12,542.8202**	**12,542.8202**	**1.6607**		**12,584.3376**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0415	1.7357	0.5239	8.0600e-003	0.2779	0.0109	0.2888	0.0800	0.0104	0.0904		860.1587	860.1587	0.0119	0.1288	898.8435
Worker	0.3010	0.1640	2.5962	8.0600e-003	0.9529	4.5500e-003	0.9575	0.2528	4.1900e-003	0.2570		831.6978	831.6978	0.0198	0.0190	837.8450
Total	**0.3425**	**1.8997**	**3.1201**	**0.0161**	**1.2308**	**0.0155**	**1.2463**	**0.3328**	**0.0146**	**0.3474**		**1,691.8565**	**1,691.8565**	**0.0317**	**0.1478**	**1,736.6885**

3.3 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.2561					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**14.4368**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0597	0.0325	0.5148	1.6000e-003	0.1889	9.0000e-004	0.1898	0.0501	8.3000e-004	0.0510		164.9056	164.9056	3.9200e-003	3.7600e-003	166.1244
Total	**0.0597**	**0.0325**	**0.5148**	**1.6000e-003**	**0.1889**	**9.0000e-004**	**0.1898**	**0.0501**	**8.3000e-004**	**0.0510**		**164.9056**	**164.9056**	**3.9200e-003**	**3.7600e-003**	**166.1244**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	14.2561					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**14.2858**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0597	0.0325	0.5148	1.6000e-003	0.1889	9.0000e-004	0.1898	0.0501	8.3000e-004	0.0510		164.9056	164.9056	3.9200e-003	3.7600e-003	166.1244
Total	**0.0597**	**0.0325**	**0.5148**	**1.6000e-003**	**0.1889**	**9.0000e-004**	**0.1898**	**0.0501**	**8.3000e-004**	**0.0510**		**164.9056**	**164.9056**	**3.9200e-003**	**3.7600e-003**	**166.1244**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

IPQ-37 FMC Willow Phase 2 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2895	0.3081	2.4769	5.8100e-003	0.6236	4.1200e-003	0.6277	0.1661	3.8500e-003	0.1699		606.3737	606.3737	0.0320	0.0274	615.3440
Unmitigated	0.2895	0.3081	2.4769	5.8100e-003	0.6236	4.1200e-003	0.6277	0.1661	3.8500e-003	0.1699		606.3737	606.3737	0.0320	0.0274	615.3440

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	12.00	12.00	12.00	25,618	25,618
Condo/Townhouse	104.00	104.00	104.00	270,519	270,519
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	116.00	116.00	116.00	296,137	296,137

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	100	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Condo/Townhouse	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Other Asphalt Surfaces	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947
NaturalGas Unmitigated	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1483.74	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0160**	**0.1367**	**0.0582**	**8.7000e-004**		**0.0111**	**0.0111**		**0.0111**	**0.0111**		**174.5574**	**174.5574**	**3.3500e-003**	**3.2000e-003**	**175.5947**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	1.48374	0.0160	0.1367	0.0582	8.7000e-004		0.0111	0.0111		0.0111	0.0111		174.5574	174.5574	3.3500e-003	3.2000e-003	175.5947
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0160**	**0.1367**	**0.0582**	**8.7000e-004**		**0.0111**	**0.0111**		**0.0111**	**0.0111**		**174.5574**	**174.5574**	**3.3500e-003**	**3.2000e-003**	**175.5947**

6.0 Area Detail

6.1 Mitigation Measures Area

IPQ-37 FMC Willow Phase 2 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.2814	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.8665	3.8665	3.7100e-003	0.0000	3.9593
Unmitigated	1.2814	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.8665	3.8665	3.7100e-003	0.0000	3.9593

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1270					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0645	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119		3.8665	3.8665	3.7100e-003		3.9593
Total	**1.2814**	**0.0247**	**2.1449**	**1.1000e-004**		**0.0119**	**0.0119**		**0.0119**	**0.0119**	**0.0000**	**3.8665**	**3.8665**	**3.7100e-003**	**0.0000**	**3.9593**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0898					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1270					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0645	0.0247	2.1449	1.1000e-004		0.0119	0.0119		0.0119	0.0119		3.8665	3.8665	3.7100e-003		3.9593
Total	**1.2814**	**0.0247**	**2.1449**	**1.1000e-004**		**0.0119**	**0.0119**		**0.0119**	**0.0119**	**0.0000**	**3.8665**	**3.8665**	**3.7100e-003**	**0.0000**	**3.9593**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

IPQ-37 FMC Willow Phase 2 - Alameda County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

IPQ-37 FMC Willow Phase 2 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

IPQ-37 FMC Willow Phase 2

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	14.00	1000sqft	0.32	14,000.00	0
City Park	5.00	Acre	5.00	217,800.00	0
Condo/Townhouse	26.00	Dwelling Unit	0.68	51,409.00	74

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas and Electric Company				
CO2 Intensity (lb/MWhr)	203.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run 5 - Revised site plan: 26 DU Phase 2, add Grand Park. Underground utilities and grading moved to Phase 1.
Construcion models only remaining building constructiona and architecitural coating after buildout of Phase 1.

Land Use - Parking includes parking lots streets and sidewalks.

Construction Phase - Construction schedule per project applicant/engineer.
Architectural coating concurrent with building construction.

Off-road Equipment - Construction equipment per project applicant/engineer.

Off-road Equipment - Construction equipment per project applicant/engineer.

Off-road Equipment - Construction equipment per project applicant/engineer.
Off-Highway Truck = water truck.

Trips and VMT -

Grading -

IPQ-37 FMC Willow Phase 2 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Architectural Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Vehicle Trips - Trip generation rates per traffic study (Fehr & Peers 2021).
Residential trip rates account for "internalization", trip purpose set to 100% primary.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust -

Woodstoves - No hearths per project applicant.

Consumer Products -

Area Coating - VOC limits per BAAQMD Regulation 8 Rule 3: 50 g/L for flat interiior and exterior and 100 g/L for pavement marking.

Landscape Equipment -

Energy Use -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - Dust mitigation per BAAQMD BCMMs.
Tier 4 engine mitigation per Mitigation Measure AQ-1.

Area Mitigation - CalEEMod error, defaults correct.

Energy Mitigation - Per 2019 Title 24 Residential Complinace Manual Eq. 7-1: kW = (CFA X A)/1000 + (DU X B)
kW = (41,009 X 0.628)/1000 + (26 X 1.12) = 55 kW
kWhr/year = kW X 24 hours X 365 days X 20% = 96,139 kWhr/year.

Water Mitigation - 20% water conservation per 2019 CalGreen not acconted for in model defaults.

Waste Mitigation - 25% solid waste diversion per AB 341 not accounted for in model defaults.

Fleet Mix - CalEEMod error, defaults correct.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	150.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	150.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	150	50

IPQ-37 FMC Willow Phase 2 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblAreaCoating	Area_EF_Nonresidential_Interior	100	50
tblAreaCoating	Area_EF_Parking	150	100
tblAreaCoating	Area_EF_Residential_Exterior	150	50
tblAreaCoating	Area_EF_Residential_Interior	100	50
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	230.00	23.00
tblConstructionPhase	PhaseEndDate	9/15/2025	10/31/2024
tblConstructionPhase	PhaseEndDate	8/18/2025	10/31/2024
tblConstructionPhase	PhaseStartDate	8/19/2025	10/1/2024
tblFireplaces	NumberGas	3.90	0.00
tblFireplaces	NumberWood	4.42	0.00
tblLandUse	LandUseSquareFeet	26,000.00	51,409.00
tblLandUse	LotAcreage	1.63	0.68
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	8.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	4.00
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	ST_TR	1.96	2.40
tblVehicleTrips	ST_TR	8.14	4.00
tblVehicleTrips	SU_TR	2.19	2.40
tblVehicleTrips	SU_TR	6.28	4.00
tblVehicleTrips	WD_TR	0.78	2.40
tblVehicleTrips	WD_TR	7.32	4.00
tblWoodstoves	NumberCatalytic	0.52	0.00
tblWoodstoves	NumberNoncatalytic	0.52	0.00

2.0 Emissions Summary

IPQ-37 FMC Willow Phase 2 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.2518	0.7194	0.9150	1.7600e-003	0.0157	0.0307	0.0464	4.2600e-003	0.0299	0.0342	0.0000	152.4896	152.4896	0.0179	1.6000e-003	153.4144
Maximum	**0.2518**	**0.7194**	**0.9150**	**1.7600e-003**	**0.0157**	**0.0307**	**0.0464**	**4.2600e-003**	**0.0299**	**0.0342**	**0.0000**	**152.4896**	**152.4896**	**0.0179**	**1.6000e-003**	**153.4144**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.1956	0.1931	0.9988	1.7600e-003	0.0157	4.4300e-003	0.0202	4.2600e-003	4.4200e-003	8.6800e-003	0.0000	152.4894	152.4894	0.0179	1.6000e-003	153.4142
Maximum	**0.1956**	**0.1931**	**0.9988**	**1.7600e-003**	**0.0157**	**4.4300e-003**	**0.0202**	**4.2600e-003**	**4.4200e-003**	**8.6800e-003**	**0.0000**	**152.4894**	**152.4894**	**0.0179**	**1.6000e-003**	**153.4142**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**22.33**	**73.16**	**-9.16**	**0.00**	**0.00**	**85.57**	**56.57**	**0.00**	**85.22**	**74.58**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)

IPQ-37 FMC Willow Phase 2 - Alameda County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2279	2.2200e-003	0.1930	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3157	0.3157	3.0000e-004	0.0000	0.3233
Energy	2.9200e-003	0.0250	0.0106	1.6000e-004		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.0000	40.5409	40.5409	2.4400e-003	7.6000e-004	40.8277
Mobile	0.0473	0.0608	0.4522	1.0000e-003	0.1093	7.5000e-004	0.1100	0.0292	7.0000e-004	0.0299	0.0000	94.9207	94.9207	5.6600e-003	4.7500e-003	96.4780
Waste						0.0000	0.0000		0.0000	0.0000	2.5151	0.0000	2.5151	0.1486	0.0000	6.2310
Water						0.0000	0.0000		0.0000	0.0000	0.5374	3.1231	3.6606	0.0557	1.3600e-003	5.4598
Total	**0.2781**	**0.0879**	**0.6559**	**1.1700e-003**	**0.1093**	**3.8400e-003**	**0.1131**	**0.0292**	**3.7900e-003**	**0.0330**	**3.0525**	**138.9004**	**141.9529**	**0.2127**	**6.8700e-003**	**149.3197**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2279	2.2200e-003	0.1930	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3157	0.3157	3.0000e-004	0.0000	0.3233
Energy	2.9200e-003	0.0250	0.0106	1.6000e-004		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.0000	31.6457	31.6457	1.0000e-003	5.8000e-004	31.8446
Mobile	0.0473	0.0608	0.4522	1.0000e-003	0.1093	7.5000e-004	0.1100	0.0292	7.0000e-004	0.0299	0.0000	94.9207	94.9207	5.6600e-003	4.7500e-003	96.4780
Waste						0.0000	0.0000		0.0000	0.0000	1.8863	0.0000	1.8863	0.1115	0.0000	4.6732
Water						0.0000	0.0000		0.0000	0.0000	0.4299	2.4985	2.9285	0.0446	1.0900e-003	4.3679
Total	**0.2781**	**0.0879**	**0.6559**	**1.1700e-003**	**0.1093**	**3.8400e-003**	**0.1131**	**0.0292**	**3.7900e-003**	**0.0330**	**2.3162**	**129.3806**	**131.6969**	**0.1630**	**6.4200e-003**	**137.6869**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**24.12**	**6.85**	**7.22**	**23.38**	**6.55**	**7.79**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction	Building Construction	10/1/2024	10/31/2024	5	23	
2	Architectural Coating	Architectural Coating	10/1/2024	10/31/2024	5	23	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.32

Residential Indoor: 104,103; Residential Outdoor: 34,701; Non-Residential Indoor: 750; Non-Residential Outdoor: 250; Striped Parking Area: 840 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction	Aerial Lifts	4	8.00	63	0.31
Building Construction	Air Compressors	8	8.00	78	0.48
Building Construction	Cranes	4	7.00	231	0.29
Building Construction	Forklifts	4	8.00	89	0.20
Building Construction	Generator Sets	8	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Welders	4	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction	34	116.00	41.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	23.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0814	0.6822	0.8548	1.5300e-003		0.0298	0.0298		0.0290	0.0290	0.0000	130.8545	130.8545	0.0173	0.0000	131.2877
Total	**0.0814**	**0.6822**	**0.8548**	**1.5300e-003**		**0.0298**	**0.0298**		**0.0290**	**0.0290**	**0.0000**	**130.8545**	**130.8545**	**0.0173**	**0.0000**	**131.2877**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7000e-004	0.0207	6.1200e-003	9.0000e-005	3.1000e-003	1.3000e-004	3.2200e-003	9.0000e-004	1.2000e-004	1.0200e-003	0.0000	8.9801	8.9801	1.2000e-004	1.3500e-003	9.3842
Worker	3.2600e-003	2.1400e-003	0.0278	9.0000e-005	0.0106	5.0000e-005	0.0106	2.8100e-003	5.0000e-005	2.8500e-003	0.0000	8.1105	8.1105	2.2000e-004	2.2000e-004	8.1802
Total	**3.7300e-003**	**0.0228**	**0.0339**	**1.8000e-004**	**0.0137**	**1.8000e-004**	**0.0138**	**3.7100e-003**	**1.7000e-004**	**3.8700e-003**	**0.0000**	**17.0907**	**17.0907**	**3.4000e-004**	**1.5700e-003**	**17.5644**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0269	0.1684	0.9383	1.5300e-003		4.2000e-003	4.2000e-003		4.2000e-003	4.2000e-003	0.0000	130.8544	130.8544	0.0173	0.0000	131.2875
Total	**0.0269**	**0.1684**	**0.9383**	**1.5300e-003**		**4.2000e-003**	**4.2000e-003**		**4.2000e-003**	**4.2000e-003**	**0.0000**	**130.8544**	**130.8544**	**0.0173**	**0.0000**	**131.2875**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.7000e-004	0.0207	6.1200e-003	9.0000e-005	3.1000e-003	1.3000e-004	3.2200e-003	9.0000e-004	1.2000e-004	1.0200e-003	0.0000	8.9801	8.9801	1.2000e-004	1.3500e-003	9.3842
Worker	3.2600e-003	2.1400e-003	0.0278	9.0000e-005	0.0106	5.0000e-005	0.0106	2.8100e-003	5.0000e-005	2.8500e-003	0.0000	8.1105	8.1105	2.2000e-004	2.2000e-004	8.1802
Total	**3.7300e-003**	**0.0228**	**0.0339**	**1.8000e-004**	**0.0137**	**1.8000e-004**	**0.0138**	**3.7100e-003**	**1.7000e-004**	**3.8700e-003**	**0.0000**	**17.0907**	**17.0907**	**3.4000e-004**	**1.5700e-003**	**17.5644**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1639					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0800e-003	0.0140	0.0208	3.0000e-005		7.0000e-004	7.0000e-004		7.0000e-004	7.0000e-004	0.0000	2.9362	2.9362	1.7000e-004	0.0000	2.9404
Total	**0.1660**	**0.0140**	**0.0208**	**3.0000e-005**		**7.0000e-004**	**7.0000e-004**		**7.0000e-004**	**7.0000e-004**	**0.0000**	**2.9362**	**2.9362**	**1.7000e-004**	**0.0000**	**2.9404**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	4.2000e-004	5.5100e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.6081	1.6081	4.0000e-005	4.0000e-005	1.6219
Total	**6.5000e-004**	**4.2000e-004**	**5.5100e-003**	**2.0000e-005**	**2.0900e-003**	**1.0000e-005**	**2.1000e-003**	**5.6000e-004**	**1.0000e-005**	**5.7000e-004**	**0.0000**	**1.6081**	**1.6081**	**4.0000e-005**	**4.0000e-005**	**1.6219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Architectural Coating - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1639					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.4000e-004	1.4800e-003	0.0211	3.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	2.9362	2.9362	1.7000e-004	0.0000	2.9404
Total	**0.1643**	**1.4800e-003**	**0.0211**	**3.0000e-005**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**2.9362**	**2.9362**	**1.7000e-004**	**0.0000**	**2.9404**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.5000e-004	4.2000e-004	5.5100e-003	2.0000e-005	2.0900e-003	1.0000e-005	2.1000e-003	5.6000e-004	1.0000e-005	5.7000e-004	0.0000	1.6081	1.6081	4.0000e-005	4.0000e-005	1.6219
Total	**6.5000e-004**	**4.2000e-004**	**5.5100e-003**	**2.0000e-005**	**2.0900e-003**	**1.0000e-005**	**2.1000e-003**	**5.6000e-004**	**1.0000e-005**	**5.7000e-004**	**0.0000**	**1.6081**	**1.6081**	**4.0000e-005**	**4.0000e-005**	**1.6219**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0473	0.0608	0.4522	1.0000e-003	0.1093	7.5000e-004	0.1100	0.0292	7.0000e-004	0.0299	0.0000	94.9207	94.9207	5.6600e-003	4.7500e-003	96.4780
Unmitigated	0.0473	0.0608	0.4522	1.0000e-003	0.1093	7.5000e-004	0.1100	0.0292	7.0000e-004	0.0299	0.0000	94.9207	94.9207	5.6600e-003	4.7500e-003	96.4780

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	12.00	12.00	12.00	25,618	25,618
Condo/Townhouse	104.00	104.00	104.00	270,519	270,519
Other Asphalt Surfaces	0.00	0.00	0.00		
Total	116.00	116.00	116.00	296,137	296,137

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	9.50	7.30	7.30	33.00	48.00	19.00	66	28	6
Condo/Townhouse	10.80	4.80	5.70	31.00	15.00	54.00	100	0	0
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Condo/Townhouse	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423
Other Asphalt Surfaces	0.570753	0.056481	0.179220	0.111941	0.020784	0.005211	0.013984	0.013033	0.000790	0.000560	0.024477	0.000343	0.002423

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.7458	2.7458	4.4000e-004	5.0000e-005	2.7729
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	11.6409	11.6409	1.8800e-003	2.3000e-004	11.7560
NaturalGas Mitigated	2.9200e-003	0.0250	0.0106	1.6000e-004		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.0000	28.8999	28.8999	5.5000e-004	5.3000e-004	29.0717
NaturalGas Unmitigated	2.9200e-003	0.0250	0.0106	1.6000e-004		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.0000	28.8999	28.8999	5.5000e-004	5.3000e-004	29.0717

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	541564	2.9200e-003	0.0250	0.0106	1.6000e-004		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.0000	28.8999	28.8999	5.5000e-004	5.3000e-004	29.0717
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.9200e-003**	**0.0250**	**0.0106**	**1.6000e-004**		**2.0200e-003**	**2.0200e-003**		**2.0200e-003**	**2.0200e-003**	**0.0000**	**28.8999**	**28.8999**	**5.5000e-004**	**5.3000e-004**	**29.0717**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	541564	2.9200e-003	0.0250	0.0106	1.6000e-004		2.0200e-003	2.0200e-003		2.0200e-003	2.0200e-003	0.0000	28.8999	28.8999	5.5000e-004	5.3000e-004	29.0717
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**2.9200e-003**	**0.0250**	**0.0106**	**1.6000e-004**		**2.0200e-003**	**2.0200e-003**		**2.0200e-003**	**2.0200e-003**	**0.0000**	**28.8999**	**28.8999**	**5.5000e-004**	**5.3000e-004**	**29.0717**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
Condo/Townhouse	125816	11.6409	1.8800e-003	2.3000e-004	11.7560
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**11.6409**	**1.8800e-003**	**2.3000e-004**	**11.7560**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	-32046.3	-2.9651	-0.0005	-0.0001	-2.9944
Condo/Townhouse	93769.2	8.6759	1.4000e-003	1.7000e-004	8.7617
Other Asphalt Surfaces	-32046.3	-2.9651	-0.0005	-0.0001	-2.9944
Total		**2.7458**	**4.4000e-004**	**5.0000e-005**	**2.7729**

6.0 Area Detail

6.1 Mitigation Measures Area

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2279	2.2200e-003	0.1930	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3157	0.3157	3.0000e-004	0.0000	0.3233
Unmitigated	0.2279	2.2200e-003	0.1930	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3157	0.3157	3.0000e-004	0.0000	0.3233

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0164					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2057					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.8100e-003	2.2200e-003	0.1930	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3157	0.3157	3.0000e-004	0.0000	0.3233
Total	**0.2279**	**2.2200e-003**	**0.1930**	**1.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**0.3157**	**0.3157**	**3.0000e-004**	**0.0000**	**0.3233**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0164					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2057					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.8100e-003	2.2200e-003	0.1930	1.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	0.3157	0.3157	3.0000e-004	0.0000	0.3233
Total	**0.2279**	**2.2200e-003**	**0.1930**	**1.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**0.3157**	**0.3157**	**3.0000e-004**	**0.0000**	**0.3233**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.9285	0.0446	1.0900e-003	4.3679
Unmitigated	3.6606	0.0557	1.3600e-003	5.4598

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 5.95741	1.9292	3.1000e-004	4.0000e-005	1.9483
Condo/Townhouse	1.694 / 1.06796	1.7314	0.0554	1.3300e-003	3.5116
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**3.6606**	**0.0557**	**1.3700e-003**	**5.4598**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 4.76593	1.5434	2.5000e-004	3.0000e-005	1.5586
Condo/Townhouse	1.3552 / 0.854368	1.3851	0.0443	1.0600e-003	2.8093
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**2.9285**	**0.0446**	**1.0900e-003**	**4.3679**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.8863	0.1115	0.0000	4.6732
Unmitigated	2.5151	0.1486	0.0000	6.2310

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.43	0.0873	5.1600e-003	0.0000	0.2163
Condo/Townhouse	11.96	2.4278	0.1435	0.0000	6.0147
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**2.5151**	**0.1486**	**0.0000**	**6.2310**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.3225	0.0655	3.8700e-003	0.0000	0.1622
Condo/Townhouse	8.97	1.8208	0.1076	0.0000	4.5110
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**1.8863**	**0.1115**	**0.0000**	**4.6732**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

Appendix B

HRA Calculations and Model Output

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DPM Emissions

g/pound	453.59

			At Platform			Approach/Departure				
			Idle			Accelerate		Decelerate		
Emission Factor (g/hp-hr)		HP	Load Factor	Time (s)	Emissions (lb/train)	Load Factor	Time (s)	Load Factor	Time (s)	Emissions (lb/train)
2028 Mix	0.048	3200	4.00%	60	2.2575E-04	84.0%	33.3	4.0%	33.3	2.7565E-03
Tier 4 DMU	0.015	1200	4.00%	60	2.6456E-05	84.0%	33.3	4.0%	33.3	3.2302E-04

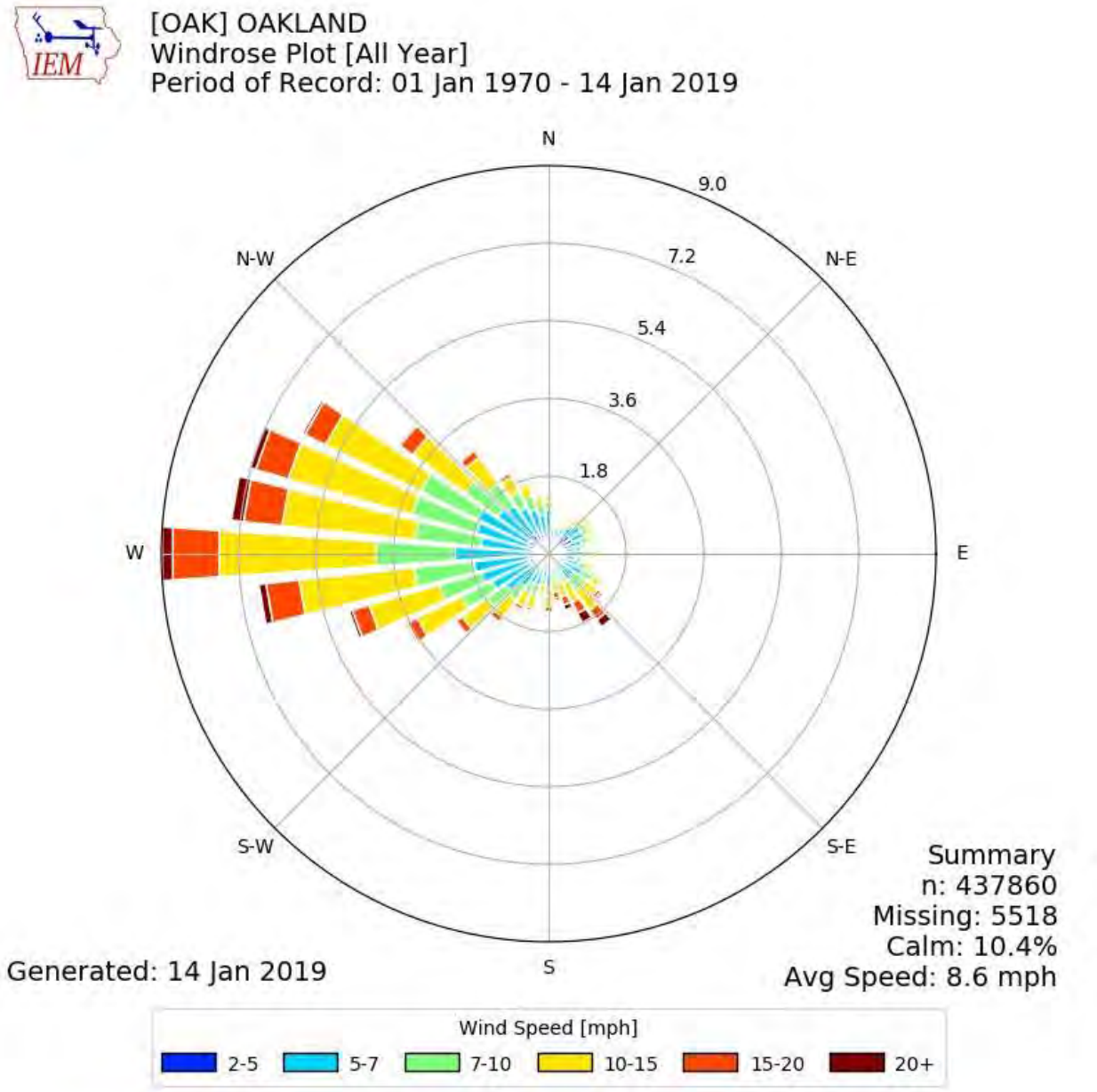
Scenario 1 - 6 trains per day assumption per Newark TOD DEIR, 2028 average emissions							
		Trains per Day		Peak Hour		Annual	
Source	Emissions Control	Weekday	Weekend	Trains	Emissions (pound/hr)	Total Trains	Emissions (pound/yr)
Platform	2028 Mix	6	2	1	2.2575E-04	1,768	3.9913E-01
Track	2028 Mix	6	2	1	2.7565E-03	1,768	4.8734E+00
Scenario 2 - 25 Multi Unit Diesel trains per day assumption per Dumbarton Corrdior Study, Tier 4 emissions							
		Trains per Day		Peak Hour		Annual	
Source	Emissions Control	Weekday	Weekend	Trains	Emissions (pound/hr)	Total Trains	Emissions (pound/yr)
Platform	Tier 4	25	10	3	7.9367E-05	7,540	1.9948E-01
Track	Tier 4	25	10	3	9.6907E-04	7,540	2.4356E+00

Nostes:
1. Emissions factor soiurce - USEPA Fact Sheet Emission Factors for Locomotives (2009).
2. Scenario 1 = 6 commuter trains per day assumption per the Dumbarton TOD EIR. Trains comprising 1 diesel locomotive pulling 5 or 6 passemger cars, typical of current Caltrain train confirugatioons. Emissions conforming to USEPA estimated average for line haul locomotive in 2028.
3. Scenario 2 = 25 DMU trains per day assumption per the highest estimated rail ridership scenario in the Dumabrton Transportation Corridor Study (2017). DMU trains would be new construction conforming to USEPA Tier 4 standards, typical of other DMU tains in operation in the Bay Area (Sonoma - Marin Transit).

Variable Emissions Fraction

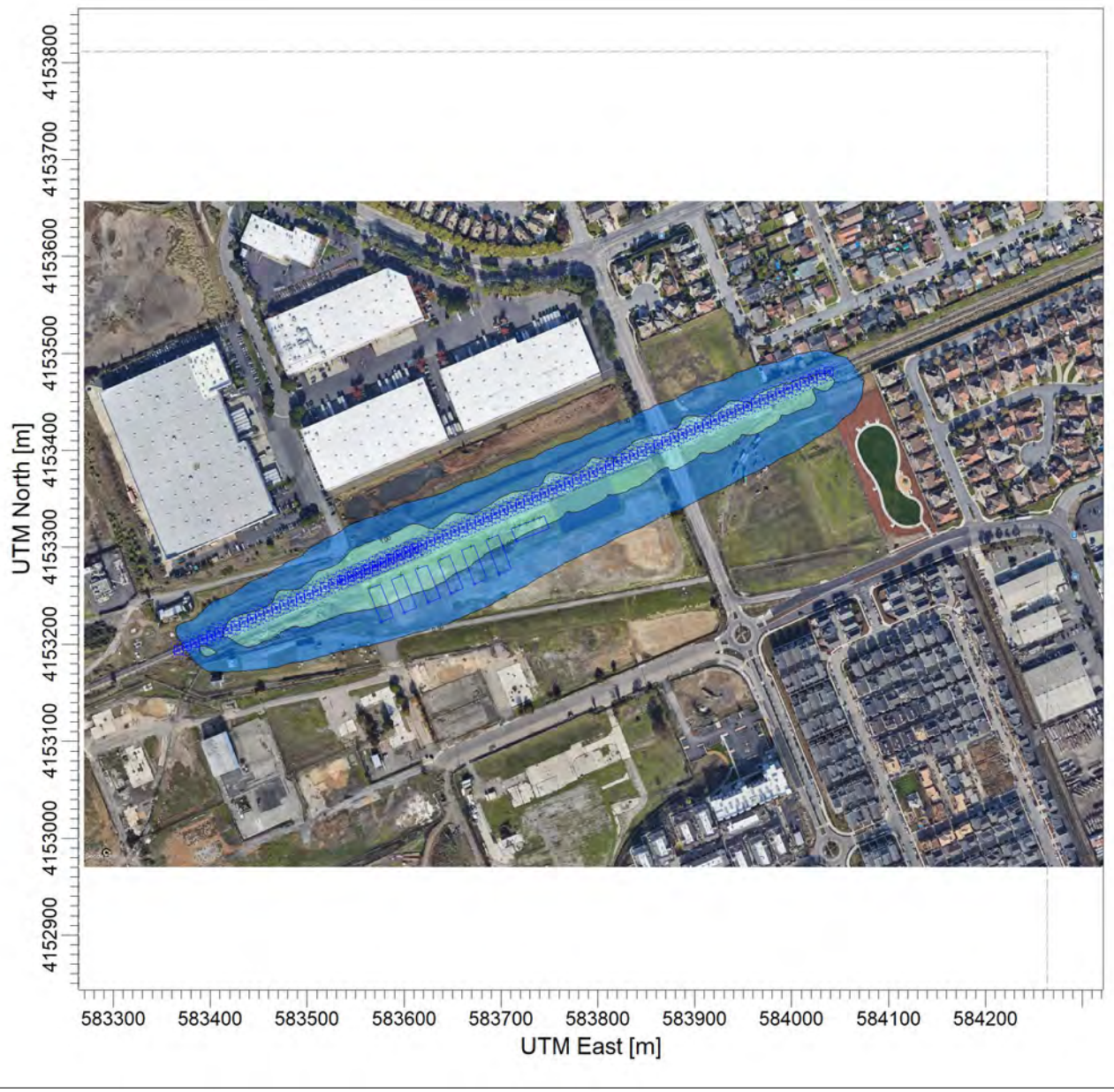
	Weekday				Weekend			
Hour Ending	NB	SB	Total	Fraction Peak	NB	SB	Total	Fraction Peak
1	0	1	1	0.13	0	1	1	0.13
2	0	0	0	0.00	0	0	0	0.00
3	0	0	0	0.00	0	0	0	0.00
4	0	0	0	0.00	0	0	0	0.00
5	0	0	0	0.00	0	0	0	0.00
6	2	1	3	0.38	0	0	0	0.00
7	3	2	5	0.63	0	0	0	0.00
8	2	4	6	0.75	1	0	1	0.13
9	4	4	8	1.00	0	0	0	0.00
10	2	4	6	0.75	1	1	2	0.25
11	2	2	4	0.50	2	1	3	0.38
12	1	1	2	0.25	0	0	0	0.00
13	1	1	2	0.25	1	2	3	0.38
14	1	1	2	0.25	1	1	2	0.25
15	1	1	2	0.25	0	0	0	0.00
16	2	2	4	0.50	1	1	2	0.25
17	3	1	4	0.50	1	1	2	0.25
18	4	3	7	0.88	1	0	1	0.13
19	4	3	7	0.88	1	1	2	0.25
20	2	3	5	0.63	1	1	2	0.25
21	1	1	2	0.25	0	1	1	0.13
22	1	1	2	0.25	1	1	2	0.25
23	1	1	2	0.25	1	1	2	0.25
24	1	1	2	0.25	1	1	2	0.25
		Total	76		Total		28	

Notes:
1. Assuming future Dumbarton Corridor Trains would operate to coincide with the Caltrain Redwood City Station train schedule.
2. Trains per hour from the 2019 Caltrain Redwood City schedule.


[OAK] OAKLAND
Windrose Plot [All Year]
Period of Record: 01 Jan 1970 - 14 Jan 2019
N
N-E
E
S-E
S
S-W
W
N-W
9.0
7.2
5.4
3.6
1.8
Summary
n: 437860
Missing: 5518
Calm: 10.4%
Avg Speed: 8.6 mph
Generated: 14 Jan 2019
Wind Speed [mph]
2-5
5-7
7-10
10-15
15-20
20+

PROJECT TITLE:

FMC Willow
Scenario 1 Residential Cancer Risk



COMMENTS:

Increased risk in chances per million

SOURCES:

2

RECEPTORS:

1061

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

12/7/2021

SCALE: 1:6,897

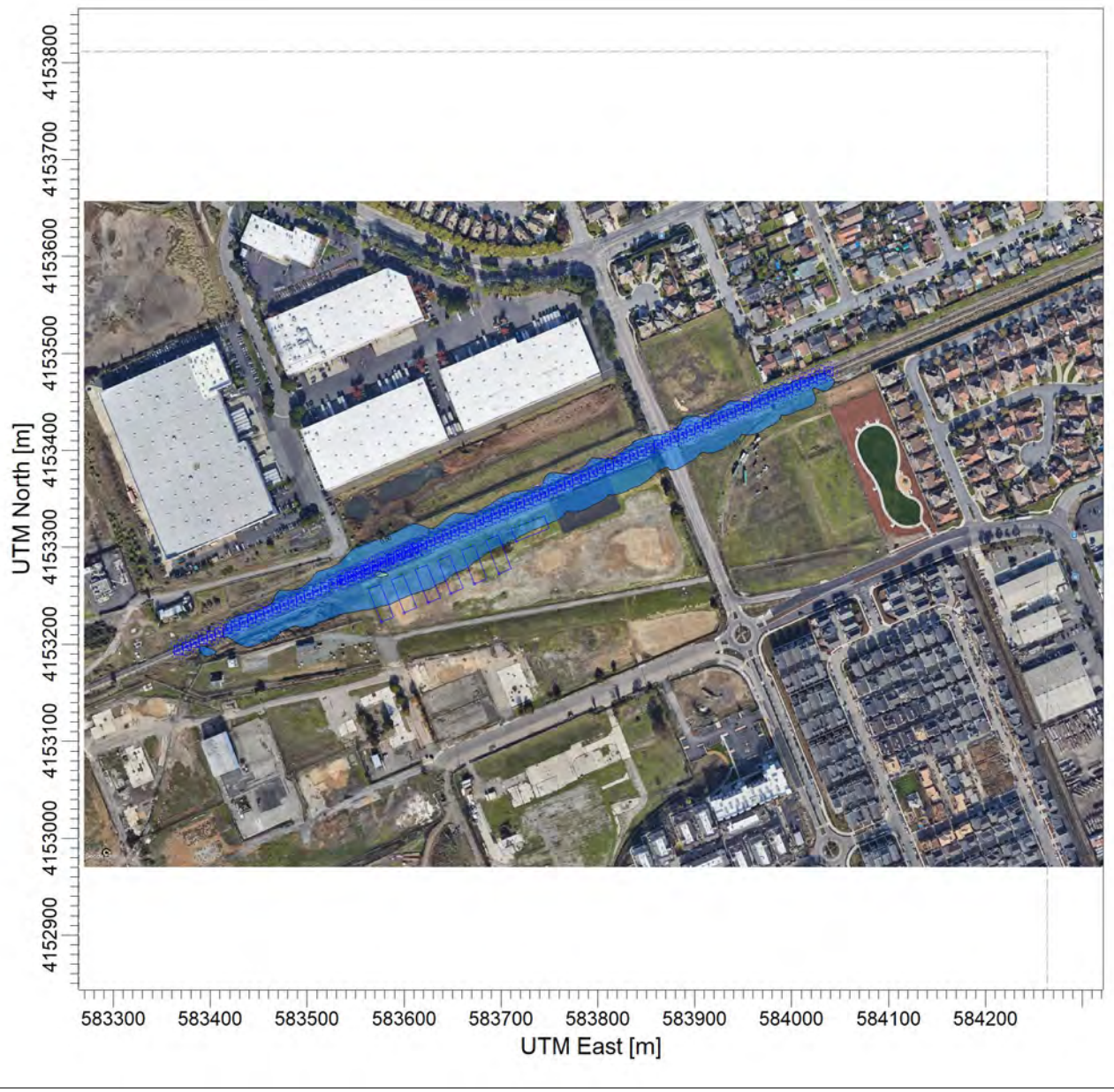
0 0.2 km

PROJECT NO.:

AERMOD View - Lakes Environmental Software

PROJECT TITLE:

FMC Willow
Scenario 2 Residential Cancer Risk



COMMENTS:

Increased risk in chances per million

SOURCES:

2

RECEPTORS:

1061

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

12/7/2021

SCALE: 1:6,897

0 0.2 km

PROJECT NO.:

AERMOD View - Lakes Environmental Software

Control Pathway

Dispersion Options

Titles

C:\Users\mdrol\Desktop\FMC Willow HRA\FMC Willow Dispersion\FMC Will

Dispersion Options

- [x] Regulatory Default
- [ ] Non-Default Options

Dispersion Coefficient

Rural

Output Type

- [x] Concentration
- [ ] Total Deposition (Dry & Wet)
- [ ] Dry Deposition
- [ ] Wet Deposition

Plume Depletion

- [ ] Dry Removal
- [ ] Wet Removal

Output Warnings

- [ ] No Output Warnings
- [ ] Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

SO2

Averaging Time Options

Hours

1	2	3	4	6	8	12	24
■	☐	☐	☐	☐	☐	☐	☐

- [ ] Month
- [x] Period
- [ ] Annual

- [ ] 1-Hour SO2 Non-NAAQS
- [x] 1-Hour SO2 NAAQS

Exponential Decay

Option not available

Terrain Height Options

- [ ] Flat
- [x] Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

- [x] Yes
- [ ] No

Default Height = 1.20 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: FMC Willow Dispersion R2.err

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME

Source: PLATFORM (Platform)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
9.12	1.00000		583533.52	4153265.25	3.27	4.15
			583617.53	4153301.33	3.12	4.15

Source Type: LINE VOLUME

Source: TRACK (Track)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
9.12	1.00000		583363.02	4153192.59	3.02	4.15
			584043.45	4153483.48	3.90	4.15

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
PLATFORM	L0000001	583537.71	4153267.05	3.37	4.15	0.10000	9.12		4.24	3.86
	L0000002	583546.09	4153270.65	3.52	4.15	0.10000	9.12		4.24	3.86
	L0000003	583554.48	4153274.25	3.77	4.15	0.10000	9.12		4.24	3.86
	L0000004	583562.86	4153277.85	3.92	4.15	0.10000	9.12		4.24	3.86
	L0000005	583571.24	4153281.45	3.78	4.15	0.10000	9.12		4.24	3.86
	L0000006	583579.63	4153285.05	3.58	4.15	0.10000	9.12		4.24	3.86
	L0000007	583588.01	4153288.65	3.45	4.15	0.10000	9.12		4.24	3.86
	L0000008	583596.40	4153292.25	3.35	4.15	0.10000	9.12		4.24	3.86
	L0000009	583604.78	4153295.85	3.24	4.15	0.10000	9.12		4.24	3.86
	L0000010	583613.16	4153299.46	3.12	4.15	0.10000	9.12		4.24	3.86

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
TRACK	L0000011	583367.22	4153194.38	3.08	4.15	0.01235	9.12		4.24	3.86
	L0000012	583375.61	4153197.97	3.21	4.15	0.01235	9.12		4.24	3.86
	L0000013	583384.00	4153201.56	3.39	4.15	0.01235	9.12		4.24	3.86
	L0000014	583392.39	4153205.14	3.55	4.15	0.01235	9.12		4.24	3.86
	L0000015	583400.78	4153208.73	3.70	4.15	0.01235	9.12		4.24	3.86
	L0000016	583409.17	4153212.32	3.82	4.15	0.01235	9.12		4.24	3.86
	L0000017	583417.56	4153215.90	3.87	4.15	0.01235	9.12		4.24	3.86
	L0000018	583425.94	4153219.49	3.46	4.15	0.01235	9.12		4.24	3.86
	L0000019	583434.33	4153223.08	3.11	4.15	0.01235	9.12		4.24	3.86
	L0000020	583442.72	4153226.66	2.93	4.15	0.01235	9.12		4.24	3.86
	L0000021	583451.11	4153230.25	3.01	4.15	0.01235	9.12		4.24	3.86
	L0000022	583459.50	4153233.84	3.13	4.15	0.01235	9.12		4.24	3.86

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
TRACK	L0000023	583467.89	4153237.42	3.27	4.15	0.01235	9.12		4.24	3.86
	L0000024	583476.28	4153241.01	3.68	4.15	0.01235	9.12		4.24	3.86
	L0000025	583484.67	4153244.60	3.86	4.15	0.01235	9.12		4.24	3.86
	L0000026	583493.06	4153248.18	3.94	4.15	0.01235	9.12		4.24	3.86
	L0000027	583501.45	4153251.77	3.57	4.15	0.01235	9.12		4.24	3.86
	L0000028	583509.84	4153255.36	3.31	4.15	0.01235	9.12		4.24	3.86
	L0000029	583518.23	4153258.94	3.19	4.15	0.01235	9.12		4.24	3.86
	L0000030	583526.62	4153262.53	3.30	4.15	0.01235	9.12		4.24	3.86
	L0000031	583535.01	4153266.12	3.36	4.15	0.01235	9.12		4.24	3.86
	L0000032	583543.40	4153269.70	3.44	4.15	0.01235	9.12		4.24	3.86
	L0000033	583551.79	4153273.29	3.70	4.15	0.01235	9.12		4.24	3.86
	L0000034	583560.18	4153276.88	3.88	4.15	0.01235	9.12		4.24	3.86
	L0000035	583568.57	4153280.46	3.86	4.15	0.01235	9.12		4.24	3.86
	L0000036	583576.96	4153284.05	3.63	4.15	0.01235	9.12		4.24	3.86
	L0000037	583585.35	4153287.64	3.48	4.15	0.01235	9.12		4.24	3.86
	L0000038	583593.74	4153291.22	3.38	4.15	0.01235	9.12		4.24	3.86
	L0000039	583602.13	4153294.81	3.27	4.15	0.01235	9.12		4.24	3.86
	L0000040	583610.52	4153298.40	3.16	4.15	0.01235	9.12		4.24	3.86
	L0000041	583618.91	4153301.98	3.25	4.15	0.01235	9.12		4.24	3.86
	L0000042	583627.30	4153305.57	3.53	4.15	0.01235	9.12		4.24	3.86
	L0000043	583635.69	4153309.16	3.75	4.15	0.01235	9.12		4.24	3.86
	L0000044	583644.08	4153312.74	3.73	4.15	0.01235	9.12		4.24	3.86
	L0000045	583652.47	4153316.33	3.56	4.15	0.01235	9.12		4.24	3.86
	L0000046	583660.86	4153319.92	3.41	4.15	0.01235	9.12		4.24	3.86
	L0000047	583669.25	4153323.50	3.32	4.15	0.01235	9.12		4.24	3.86

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
TRACK	L0000048	583677.64	4153327.09	3.25	4.15	0.01235	9.12		4.24	3.86
	L0000049	583686.02	4153330.68	3.18	4.15	0.01235	9.12		4.24	3.86
	L0000050	583694.41	4153334.26	3.36	4.15	0.01235	9.12		4.24	3.86
	L0000051	583702.80	4153337.85	3.61	4.15	0.01235	9.12		4.24	3.86
	L0000052	583711.19	4153341.44	3.83	4.15	0.01235	9.12		4.24	3.86
	L0000053	583719.58	4153345.02	3.74	4.15	0.01235	9.12		4.24	3.86
	L0000054	583727.97	4153348.61	3.62	4.15	0.01235	9.12		4.24	3.86
	L0000055	583736.36	4153352.20	3.51	4.15	0.01235	9.12		4.24	3.86
	L0000056	583744.75	4153355.78	3.37	4.15	0.01235	9.12		4.24	3.86
	L0000057	583753.14	4153359.37	3.18	4.15	0.01235	9.12		4.24	3.86
	L0000058	583761.53	4153362.96	2.95	4.15	0.01235	9.12		4.24	3.86
	L0000059	583769.92	4153366.54	3.24	4.15	0.01235	9.12		4.24	3.86
	L0000060	583778.31	4153370.13	3.59	4.15	0.01235	9.12		4.24	3.86
	L0000061	583786.70	4153373.72	3.87	4.15	0.01235	9.12		4.24	3.86
	L0000062	583795.09	4153377.30	3.74	4.15	0.01235	9.12		4.24	3.86
	L0000063	583803.48	4153380.89	3.63	4.15	0.01235	9.12		4.24	3.86
	L0000064	583811.87	4153384.48	3.52	4.15	0.01235	9.12		4.24	3.86
	L0000065	583820.26	4153388.06	3.42	4.15	0.01235	9.12		4.24	3.86
	L0000066	583828.65	4153391.65	3.30	4.15	0.01235	9.12		4.24	3.86
	L0000067	583837.04	4153395.24	3.29	4.15	0.01235	9.12		4.24	3.86
	L0000068	583845.43	4153398.82	3.63	4.15	0.01235	9.12		4.24	3.86
	L0000069	583853.82	4153402.41	4.06	4.15	0.01235	9.12		4.24	3.86
	L0000070	583862.21	4153406.00	4.30	4.15	0.01235	9.12		4.24	3.86
	L0000071	583870.60	4153409.59	4.18	4.15	0.01235	9.12		4.24	3.86
	L0000072	583878.99	4153413.17	3.97	4.15	0.01235	9.12		4.24	3.86

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
TRACK	L0000073	583887.38	4153416.76	3.70	4.15	0.01235	9.12		4.24	3.86
	L0000074	583895.77	4153420.35	3.51	4.15	0.01235	9.12		4.24	3.86
	L0000075	583904.16	4153423.93	3.44	4.15	0.01235	9.12		4.24	3.86
	L0000076	583912.55	4153427.52	3.58	4.15	0.01235	9.12		4.24	3.86
	L0000077	583920.94	4153431.11	3.83	4.15	0.01235	9.12		4.24	3.86
	L0000078	583929.33	4153434.69	3.93	4.15	0.01235	9.12		4.24	3.86
	L0000079	583937.71	4153438.28	3.83	4.15	0.01235	9.12		4.24	3.86
	L0000080	583946.10	4153441.87	3.67	4.15	0.01235	9.12		4.24	3.86
	L0000081	583954.49	4153445.45	3.56	4.15	0.01235	9.12		4.24	3.86
	L0000082	583962.88	4153449.04	3.55	4.15	0.01235	9.12		4.24	3.86
	L0000083	583971.27	4153452.63	3.56	4.15	0.01235	9.12		4.24	3.86
	L0000084	583979.66	4153456.21	3.56	4.15	0.01235	9.12		4.24	3.86
	L0000085	583988.05	4153459.80	3.71	4.15	0.01235	9.12		4.24	3.86
	L0000086	583996.44	4153463.39	3.94	4.15	0.01235	9.12		4.24	3.86
	L0000087	584004.83	4153466.97	4.18	4.15	0.01235	9.12		4.24	3.86
	L0000088	584013.22	4153470.56	4.17	4.15	0.01235	9.12		4.24	3.86
	L0000089	584021.61	4153474.15	4.14	4.15	0.01235	9.12		4.24	3.86
	L0000090	584030.00	4153477.73	4.13	4.15	0.01235	9.12		4.24	3.86
	L0000091	584038.39	4153481.32	4.07	4.15	0.01235	9.12		4.24	3.86

Source Pathway

Hour / Day-of-Week Emission Rate Variation

Scenario: Scenario 1

Source ID: PLATFORM

Hour	Mon	Tues	Wed	Thr	Fri	Sat	Sun
1:00	0.13	0.13	0.13	0.13	0.13	0.13	0.13
2:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6:00	0.38	0.38	0.38	0.38	0.38	0.00	0.00
7:00	0.63	0.63	0.63	0.63	0.63	0.00	0.00
8:00	0.75	0.75	0.75	0.75	0.75	0.13	0.13
9:00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
10:00	0.75	0.75	0.75	0.75	0.75	0.25	0.25
11:00	0.50	0.50	0.50	0.50	0.50	0.38	0.38
12:00	0.25	0.25	0.25	0.25	0.25	0.00	0.00
13:00	0.25	0.25	0.25	0.25	0.25	0.38	0.38
14:00	0.25	0.25	0.25	0.25	0.25	0.25	0.25
15:00	0.25	0.25	0.25	0.25	0.25	0.00	0.00
16:00	0.50	0.50	0.50	0.50	0.50	0.25	0.25
17:00	0.50	0.50	0.50	0.50	0.50	0.25	0.25
18:00	0.88	0.88	0.88	0.88	0.88	0.13	0.13
19:00	0.88	0.88	0.88	0.88	0.88	0.25	0.25
20:00	0.63	0.63	0.63	0.63	0.63	0.25	0.25
21:00	0.25	0.25	0.25	0.25	0.25	0.13	0.13
22:00	0.25	0.25	0.25	0.25	0.25	0.25	0.25
23:00	0.25	0.25	0.25	0.25	0.25	0.25	0.25
24:00	0.25	0.25	0.25	0.25	0.25	0.25	0.25

Source ID: TRACK

Hour	Mon	Tues	Wed	Thr	Fri	Sat	Sun
1:00	0.13	0.13	0.13	0.13	0.13	0.13	0.13
2:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5:00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6:00	0.38	0.38	0.38	0.38	0.38	0.00	0.00
7:00	0.63	0.63	0.63	0.63	0.63	0.00	0.00
8:00	0.75	0.75	0.75	0.75	0.75	0.13	0.13
9:00	1.00	1.00	1.00	1.00	1.00	0.00	0.00
10:00	0.75	0.75	0.75	0.75	0.75	0.25	0.25
11:00	0.50	0.50	0.50	0.50	0.50	0.38	0.38
12:00	0.25	0.25	0.25	0.25	0.25	0.00	0.00
13:00	0.25	0.25	0.25	0.25	0.25	0.38	0.38
14:00	0.25	0.25	0.25	0.25	0.25	0.25	0.25
15:00	0.25	0.25	0.25	0.25	0.25	0.00	0.00
16:00	0.50	0.50	0.50	0.50	0.50	0.25	0.25
17:00	0.50	0.50	0.50	0.50	0.50	0.25	0.25
18:00	0.88	0.88	0.88	0.88	0.88	0.13	0.13
19:00	0.88	0.88	0.88	0.88	0.88	0.25	0.25
20:00	0.63	0.63	0.63	0.63	0.63	0.25	0.25
21:00	0.25	0.25	0.25	0.25	0.25	0.13	0.13
22:00	0.25	0.25	0.25	0.25	0.25	0.25	0.25
23:00	0.25	0.25	0.25	0.25	0.25	0.25	0.25
24:00	0.25	0.25	0.25	0.25	0.25	0.25	0.25

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	583354.00	4153072.00	42	25	20.00	20.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	583564.39	4153258.71		3.82	
2	583596.80	4153271.84		3.44	
3	583613.96	4153279.15		3.23	
4	583669.18	4153301.33		3.68	
5	583687.31	4153308.93		3.57	
6	583714.19	4153320.43		3.81	
7	583719.51	4153322.54		3.84	
8	583726.13	4153325.28		3.86	
9	583733.76	4153328.41		3.86	
10	583739.58	4153330.66		3.88	
11	583637.22	4153288.00		3.66	

Plant Boundary Receptors

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: ..\724930.SFC

Format Type: Default AERMET format

Profile Met Data

Filename: ..\724930.PFL

Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 1.80 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2009			OAKLAND/WSO AP
Upper Air		2009			OAKLAND/WSO AP

Data Period

Data Period to Process

Start Date: 1/1/2009 Start Hour: 1 End Date: 1/2/2014 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Output Pathway

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1	■	☐	☐	☐	☐	☐	☐	☐	☐	☐		No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: FMC WILLOW DISPERSION R2.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
Period	ALL	N/A	PE00GALL.PLT

Output File of US NAAQS

Path for US NAAQS: FMC WILLOW DISPERSION R2.AD

HARP Project Summary Report 12/7/2021 7:51:19 AM

PROJECT INFORMATION
HARP Version: 21081
Project Name: FMC Willow Scenario 1 Risk
HARP Database: NA

EMISSION INVENTORY
No. of Pollutants:2
No. of Background Pollutants:0

Emissions

ScrID	StkID	ProID	PolID	PolAbbrev	Multi
Platform	0	0	9901	DieselExhPM	1
Track	0	0	9901	DieselExhPM	1

Background

PolID	PolAbbrev	Conc (ug/m^3)	MWAF

Ground level concentration files (\glc\)

9901MAXHR.txt
9901PER.txt

POLLUTANT HEALTH INFORMATION
Health Database: C:\HARP2\Tables\HEALTH17320. mdb
Health Table Version: HEALTH21221
Official: True

PolID	PolAbbrev	InhCancer	AcuteREL	InhChronicREL
9901	DieselExhPM	1.1		5

Annual Ems (lbs/yr)	MaxHr Ems (lbs/hr)	MWAF
0.39913	0.000226	1
4.6741	0.002644	1

OralChronicREL	InhChrcREL

Scenario 1 Residential Cancer Risk

*HARP - HRACalc v21081 11/29/2021 2:37:43 PM - Cancer Risk -

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO
1051	ALL		583634.36	4153274.64	1.24E-06	30YrCancerDerived_InhSoilDermMMilk_FAH16to70
1052	ALL		583637.89	4153278.94	1.30E-06	30YrCancerDerived_InhSoilDermMMilk_FAH16to70
1053	ALL		583684.79	4153303.65	1.20E-06	30YrCancerDerived_InhSoilDermMMilk_FAH16to70
1054	ALL		583689.77	4153300.73	1.08E-06	30YrCancerDerived_InhSoilDermMMilk_FAH16to70
1055	ALL		583694.61	4153301.73	1.05E-06	30YrCancerDerived_InhSoilDermMMilk_FAH16to70
1056	ALL		583697.37	4153306.18	1.11E-06	30YrCancerDerived_InhSoilDermMMilk_FAH16to70
1057	ALL		583713.87	4153313.17	1.09E-06	30YrCancerDerived_InhSoilDermMMilk_FAH16to70
1058	ALL		583717.33	4153316.85	1.14E-06	30YrCancerDerived_InhSoilDermMMilk_FAH16to70
1059	ALL		583732.52	4153319.85	1.04E-06	30YrCancerDerived_InhSoilDermMMilk_FAH16to70
1060	ALL		583735.52	4153324.14	1.11E-06	30YrCancerDerived_InhSoilDermMMilk_FAH16to70
1061	ALL		583869.91	4153374.06	6.32E-07	30YrCancerDerived_InhSoilDermMMilk_FAH16to70

HARP Project Summary Report 12/7/2021 8:02:25 AM

PROJECT INFORMATION
HARP Version: 21081
Project Name: FMC Willow Scenario 2 Risk
HARP Database: NA

EMISSION INVENTORY
No. of Pollutants:2
No. of Background Pollutants:0

Emissions

ScrID	StkID	ProID	PolID	PolAbbrev	Multi
Platform	0	0	9901	DieselExhPM	1
Track	0	0	9901	DieselExhPM	1

Background

PolID	PolAbbrev	Conc (ug/m^3)	MWAF

Ground level concentration files (\glc\)

9901MAXHR.txt
9901PER.txt

POLLUTANT HEALTH INFORMATION
Health Database: C:\HARP2\Tables\HEALTH17320. mdb
Health Table Version: HEALTH21221
Official: True

PolID	PolAbbrev	InhCancer	AcuteREL	InhChronicREL
9901	DieselExhPM	1.1		5

Annual Ems (lbs/yr)	MaxHr Ems (lbs/hr)	MWAF
0.19948	7.94E-05	1
2.336	0.000929	1

OralChronicREL	InhChrcREL

Scenario 2 Residential Cancer Risk

*HARP - HRACalc v21081 11/29/2021 2:41:03 PM - Cancer Risk

REC	GRP	NETID	X	Y	RISK_SUM	SCENARIO
1051	ALL		583634.36	4153274.64	6.21E-07	30YrCancerDerived_InhSoilDermM
1052	ALL		583637.89	4153278.94	6.50E-07	30YrCancerDerived_InhSoilDermM
1053	ALL		583684.79	4153303.65	5.99E-07	30YrCancerDerived_InhSoilDermM
1054	ALL		583689.77	4153300.73	5.38E-07	30YrCancerDerived_InhSoilDermM
1055	ALL		583694.61	4153301.73	5.24E-07	30YrCancerDerived_InhSoilDermM
1056	ALL		583697.37	4153306.18	5.55E-07	30YrCancerDerived_InhSoilDermM
1057	ALL		583713.87	4153313.17	5.44E-07	30YrCancerDerived_InhSoilDermM
1058	ALL		583717.33	4153316.85	5.68E-07	30YrCancerDerived_InhSoilDermM
1059	ALL		583732.52	4153319.85	5.22E-07	30YrCancerDerived_InhSoilDermM
1060	ALL		583735.52	4153324.14	5.55E-07	30YrCancerDerived_InhSoilDermM
1061	ALL		583869.91	4153374.06	3.16E-07	30YrCancerDerived_InhSoilDermM

Appendix C

Biological Resources Technical Report for the FMC Willow and Grand Park Project

FMC Willow and Grand Park Project

Biological Resources Technical Report

Prepared for:

City of Newark
Community Development Department
37101 Newark Boulevard
Newark, CA 94560

Prepared by:

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95630

December 2021

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TABLE OF CONTENTS

Section **Page**

1.0 Introduction 1
1.1 Purpose of the Report 1
1.2 Project Location 1
1.3 Project Description 1
1.3.1 Project Characteristics 1
1.3.2 Schedule and Phasing 2
2.0 Regulatory Setting 2
2.1 Federal Requirements 2
2.1.1 Federal Endangered Species Act 2
2.1.2 Migratory Bird Treaty Act 3
2.2 State Requirements 3
2.2.1 California Endangered Species Act 3
2.2.2 California Code of Regulations and California Fish and Game Code 3
2.2.3 California Environmental Quality Act (CEQA) 4
2.2.4 California Native Plant Protection Act 4
2.2.5 Nesting Birds 4
2.3 LOCAL REQUIREMENTS 5
2.3.1 Dumbarton Transit Oriented Development Specific Plan 5
2.3.2 Trees 5
2.4 JURISDICTIONAL WATERS 5
2.4.1 Federal Requirements 5
2.4.2 California Department of Fish and Wildlife 7
3.0 Study Methods 8
3.1 Special-Status Species Evaluation 8
3.2 Biological Surveys 9
3.2.1 Biological Reconnaissance 9
3.2.2 Focused Botanical Surveys 9
3.2.3 Burrowing Owl 10
3.2.4 Tree Inventory 10
3.3 Jurisdictional Delineation of Wetlands and Other Waters 10
4.0 Results: Environmental Setting 10
4.1 Existing Land Use and Setting 10
4.2 Topography 11
4.3 Hydrology 11
4.4 Soils 11
4.4.1 Pescadero Clay, Drained (133) 11
4.4.2 Marvin Silt Loam, Saline-alkali (125) 11
4.5 Vegetation Communities and Land Cover 12
4.5.1 Ruderal/Disturbed 12
4.5.2 Developed 12
4.5.3 Seasonal Wetland 13
4.6 Wildlife 13

5.0 Discussion: Evaluation of Biological Resources 13
5.1 Sensitive Natural Communities 13
5.2 Potential Jurisdictional Waters 14
5.2.1 Potential Waters of the U.S. 14
5.2.2 Potential Waters of the State 14
5.2.3 CDFW Jurisdictional Areas 14
5.2.4 Impacts to Aquatic Resources 15
5.3 Special-Status Species 15
5.3.1 Special-Status Animals 15
5.3.2 Nesting Migratory Birds and Raptors 20
5.3.3 Special-Status Plants 20
5.4 Protected Trees 21
6.0 Discussion: General Avoidance and Mitigation Recommendations 21
6.1 Special-Status Species 22
6.1.1 Special-Status Wildlife 22
6.2 Protected Trees 25
7.0 References 26

LIST OF APPENDICES

A Figures
B USFWS, CNDDB, and CNPS Lists of Regionally-occurring Special-status Species
C Potential for Special-Status Species to Occur in the Project Site
D Plant and Wildlife Species Observed in the Project Site
E Arborist Letter Report
F Representative Site Photos
G Salt Marsh Harvest Mouse Habitat Assessment

LIST OF TABLES

No. **Title** **Page**

1 Biological Surveys Conducted for the Proposed Project 9
2 Existing Vegetation Communities and Land Cover Types in the Project Site 12
3 Aquatic Resources in the Project Site 14
4 Regional Special-Status Species With Potential to Occur in the Project Site 15
5 Summary of Biological Resource Impacts and Mitigation Measures from the EIR and Applicability to the Proposed Project 21

1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

HELIX Environmental Planning, Inc. (HELIX) prepared this Biological Resources Technical Report (BTR) for the proposed FMC Willow and Grand Park Project (proposed project) in the City of Newark, Alameda County, California (City). The proposed project is within the Bayside Newark Transit Oriented Development (TOD) Specific Plan area, formerly known as the Dumbarton TOD Specific Plan area (City of Newark 2010). A Final Environmental Impact Report (EIR) was prepared for the Specific Plan (RBF 2011a) and certified by the City (State Clearinghouse No. 2010042012), and the Specific Plan was adopted. For most parcels within the Specific Plan area (including the project site), the evaluation conducted for the EIR was programmatic. As specified in the EIR, project-specific studies and documents consistent with the requirements of the California Environmental Quality Act (CEQA) are required for processing individual projects under the Specific Plan.

This BTR has been prepared in support of the proposed project's processing under CEQA. The purposes of the BTR are: (1) to document the environmental setting and existing biological conditions in the project site; (2) to evaluate the potential for any special-status plant or animal species or sensitive habitats to be present in or immediately adjacent to the project site and thereby be affected by the proposed project; (3) to quantify impacts to aquatic resources; (4) to document the relationship of the biological resources in the project site to applicable federal, state, and local laws and regulations; and (5) to describe measures to avoid, minimize, and/or mitigate potential impacts to all protected biological resources in compliance with the Mitigation, Monitoring, and Reporting Program (MMRP) adopted as part of the Bayside Newark TOD Specific Plan EIR (RBF 2011b).

1.2 PROJECT LOCATION

The proposed project site is located within the City of Newark in southwestern Alameda County, northwest of the intersection of Willow Street and Enterprise Drive (Appendix A, Figure 1). The proposed FMC Willow and Grand Park project would be located on the following six Assessor's Parcel Numbers (APNs): 092-0100-013, 092-0100-014, 537-0852-028, 537-0852-029, 537-0852-030, and 537-0852-031. The majority of the proposed project site is located in Sections 2 and 11 of Township 5 South, and Range 2 West of the U.S. Geological Survey (USGS) 7.5-minute "*Newark*" quadrangle map (quad). The western portion of the site is unsectioned (unsurveyed). The approximate center of the project site is at latitude 37.5215, longitude -122.0538, NAD 83. Figure 2 in Appendix A is an aerial photograph of the project site and the associated properties.

1.3 PROJECT DESCRIPTION

1.3.1 Project Characteristics

The proposed project would redevelop the 22.1-acre site into a 370-unit multi-family community including a mixed-use area of 4,000 square feet (sf) of retail and 90 affordable units (plus 1 manager unit), a 5-acre community park (Grand Park), and a 1,485-sf community building, along with approximately 1.8 acres set aside for a future transit station (including 0.1 acre of area for water quality management and 0.6 acre for public roads). The proposed residential land uses on-site would range from medium density residential (14-30 dwelling units/acre) to high density residential (25-60 dwelling

units/acre). The project would also provide a 20-foot-wide trail corridor containing a 12-foot-wide multi-purpose trail that would transect the Grand Park and run along Enterprise Drive to Willow Street. It is anticipated that the proposed trail would be eligible to be part of the regional San Francisco Bay Trail, a bicycle and pedestrian trail that will eventually allow continuous travel around the shoreline of San Francisco Bay.

The Hetch Hetchy ROW is a 100-foot-wide corridor that transects the project site. Approximately 7 acres of the project site lies north of the Hetch Hetchy ROW, and approximately 15 acres of the project site lies south of the Hetch Hetchy ROW. No development would occur within the Hetch Hetchy ROW.

Additional proposed site improvements include the following: on- and off-street parking, open space and common areas, drive aisles, underground utilities, Low Impact Development (LID) drainage and water quality treatment structures, lighting, sidewalks, and landscaping. Figure 3 in Appendix A shows detailed site plans.

1.3.2 Schedule and Phasing

The project would be constructed in two phases. Phase 1 would consist of the construction of PA1, PA2, PA3, 66 DU in PA4, and the community building (4,000 sf of retail, 344 residential DU, and 1,485 sf community building). Construction of Phase 1 would commence in April 2022 and be completed in approximately 30 months (September 2024). Phase 2 would consist of the remaining 26 DU in PA4 and the Grand Park. Construction of Phase 2 would commence with grading as early as August 2022 and is anticipated to be complete by December 2024 but could be completed as early as October 2024 (27 months). Phase 2 construction activities would overlap the Phase 1 construction activities.

2.0 REGULATORY SETTING

Policies, regulations, and plans pertaining to the protection of biological resources in the project site and vicinity are summarized in the following sections.

2.1 FEDERAL REQUIREMENTS

2.1.1 Federal Endangered Species Act

The United States Fish and Wildlife Service (USFWS) enforces the provisions stipulated in the Federal Endangered Species Act of 1973 (FESA, 16 USC Section 1531 et seq.). Species identified as threatened or endangered (50 CFR Section 17.11, and 17.12) are protected from take, which is defined as direct or indirect harm, unless a Section 10 permit is granted to an entity other than a federal agency or a Biological Opinion with incidental take provisions is rendered to a federal lead agency via a Section 7 consultation. Pursuant to the requirements of the FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally-listed species may be present on the project site and determine whether the proposed project will have a potentially significant impact on them. Under the FESA, habitat loss is considered to be an impact to a species. In addition, the USFWS is required to determine whether the project is likely to jeopardize the continued existence of any species that is proposed for listing under the FESA or to result in the destruction or adverse modification of critical habitat proposed to be designated for such species (16 USC 1536[3], [4]). Therefore, project related impacts to those species or their habitats would be considered significant and would require mitigation.

Other federal agencies designate species of concern (species that have the potential to become listed), that are evaluated during environmental review although they are not otherwise protected under the FESA. Impacts to those species or their habitats would likewise be considered significant and would require mitigation.

2.1.2 Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) of 1918 established federal responsibilities for the protection of nearly all species of birds, their eggs, and nests. The Migratory Bird Treaty Reform Act of 2004 further defined species protected under the act and excluded all non-native species. Section 16 U.S.C. 703–712 of the Act states "unless and except as permitted by regulations, it shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill" a migratory bird. A migratory bird is any species or family of birds that live, reproduce or migrate within or across international borders at some point during their annual life cycle. Currently, there are 836 migratory birds protected nationwide by the Migratory Bird Treaty Act, of which 58 are legal to hunt. The U.S. Court of Appeals for the 9th Circuit (with jurisdiction over California) has ruled that the MBTA does not prohibit incidental take (952 F 2d 297 – Court of Appeals, 9th Circuit, 1991).

2.2 STATE REQUIREMENTS

2.2.1 California Endangered Species Act

The CESA (California Fish and Game Code Sections 2050 to 2097) is similar to the FESA. The California Fish and Game Commission is responsible for maintaining lists of threatened and endangered species under the CESA. CESA prohibits the take of listed and candidate (petitioned to be listed) species. "Take" under California law means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch capture, or kill (California Fish and Game Code Section 86). The California Department of Fish and Wildlife (CDFW) can authorize take of a state-listed species under Section 2081 of the California Fish and Game Code if the take is incidental to an otherwise lawful activity, the impacts are minimized and fully mitigated, funding is ensured to implement and monitor mitigation measures, and CDFW determines that issuance would not jeopardize the continued existence of the species. A CESA permit must be obtained if a project will result in the take of listed species, either during construction or over the life of the project. For species listed under both the FESA and the CESA requiring a Biological Opinion under Section 7 of the FESA, CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the Fish and Game Code.

2.2.2 California Code of Regulations and California Fish and Game Code

The official listing of endangered and threatened animals and plants is contained in the California Code of Regulations Title 14 §670.5. A state candidate species is one that the California Fish and Game Code has formally noticed as being under review by CDFW for inclusion on the state list pursuant to Sections 2074.2 and 2075.5 of the California Fish and Game Code.

Legal protection is also provided for wildlife species in California that are identified as "fully protected animals." These species are protected under Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fishes) of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species at any time. The CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by these species. The CDFW has

informed non-federal agencies and private parties that they must avoid take of any fully protected species. However, Senate Bill 618 (2011) allows the CDFW to issue permits authorizing the incidental take of fully protected species under the CESA, so long as any such take authorization is issued in conjunction with the approval of a Natural Community Conservation Plan that covers the fully protected species (California Fish and Game Code Section 2835).

2.2.3 California Environmental Quality Act (CEQA)

Under CEQA (Public Resources Code Section 21000 et seq.), lead agencies analyze whether projects would have a substantial adverse effect on a candidate, sensitive, or special-status species (Public Resources Code Section 21001(c)). These "special-status" species generally include those listed under the FESA and the CESA, and species that are not currently protected by statute or regulation, but would be considered rare, threatened, or endangered under the criteria included in the State CEQA Guidelines Section 15380. Therefore, species that are considered rare are addressed in this study regardless of whether they are afforded special protection through any other statute or regulation. The CDFW, in consultation with the California Native Plant Society (CNPS) assigns a California Rare Plant Rank (CRPR) to native species according to rarity; plants with a CRPR of 1A, 1B, 2A, 2B, or 3 are generally considered special-status species under CEQA.

Although threatened and endangered species are protected by specific federal and state statutes, State CEQA Guidelines Section 15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare if it can be shown to meet certain specified criteria. Those criteria have been modeled after the definition in FESA and the section of the California Fish and Game Code dealing with rare or endangered plants and animals. Section 15380(d) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or the CDFW (i.e., candidate species) would occur. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agency has an opportunity to designate the species as protected, if warranted.

2.2.4 California Native Plant Protection Act

The California Native Plant Protection Act of 1977 (California Fish and Game Code Sections 1900-1913) empowers the Fish and Game Commission to list native plant species, subspecies, or varieties as endangered or rare following a public hearing. To the extent that the location of such plants is known, CDFW must notify property owners that a listed plant is known to occur on their property. Where a property owner has been so notified by CDFW, the owner must notify CDFW at least 10 days in advance of any change in land use (other than changing from one agricultural use to another), in order that CDFW may salvage listed plants that would otherwise be destroyed. Currently, 64 taxa of native plants have been listed as rare under the act.

2.2.5 Nesting Birds

California Fish and Game Code Subsections 3503 and 3800 prohibit the possession, take, or needless destruction of birds, their nests, and eggs, and the salvage of dead nongame birds. California Fish and Game Code Subsection 3503.5 protects all birds in the orders of Falconiformes and Strigiformes (birds of prey). Fish and Game Code Subsection 3513 states that it is unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of

the Interior under provisions of the Migratory Bird Treaty Act. The Attorney General of California has released an opinion that the Fish and Game Code prohibits incidental take.

2.3 LOCAL REQUIREMENTS

2.3.1 Bayside Newark Transit Oriented Development Specific Plan

The proposed project is within the Bayside Newark TOD Specific Plan area. A Final EIR (State Clearinghouse No. 2010042012) has been prepared and certified, and the Specific Plan has been adopted. For most parcels within the Specific Plan area (including the proposed project site), the evaluation conducted for the Bayside Newark TOD Specific Plan EIR was programmatic. That EIR requires project-specific studies and documentation to be completed for subsequent development in the Specific Plan area consistent with the requirements of CEQA. The Specific Plan EIR also contains measures to avoid, minimize, or mitigate potential impacts to biological resources in its MMRP that are required to be implemented by applicants proposing future projects in the Specific Plan area.

2.3.2 Trees

The City of Newark protects trees as windbreaks essential to public health and safety. The City of Newark Municipal Code Chapter 8.16.02 requires that a permit be obtained from the Public Works Director to cut down, destroy, remove, or move trees when growing on any parcel except developed residential parcels less than ten thousand square feet in area. A tree is defined in the ordinance as any live perennial woody plant with at least one well-defined stem 6 inches or greater in diameter measured at 48 inches above grade (dbh).

2.4 JURISDICTIONAL WATERS

2.4.1 Federal Requirements

Any person, firm, or agency planning to alter or work in "waters of the U.S.," including the discharge of dredged or fill material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403).

On April 21, 2020, the Environmental Protection Agency (EPA) and USACE published the Navigable Waters Protection Rule to define "Waters of the United States" in the Federal Register. On June 22, 2020, the Navigable Waters Protection Rule: Definition of "Waters of the United States" (NWPR) became effective in 49 states, including California, and in all US territories.

The NWPR regulates traditional navigable waters and perennial or intermittent tributary systems, and defines four categories of regulated waters including:

- The territorial seas and traditional navigable waters;
- Perennial and intermittent tributaries to those waters;
- Certain lakes, ponds, and impoundments; and
- Wetlands adjacent to jurisdictional waters.

The NWPR also defines 12 categories of exempted aquatic resources:

- Waters not listed as WOTUS
- Groundwater
- Ephemeral features
- Diffuse stormwater run-off
- Ditches not identified as WOTUS
- Prior converted cropland (PCC)
- Artificially irrigated areas
- Artificial lakes and ponds
- Water-filled depressions incidental to mining or construction activity
- Stormwater control features
- Groundwater recharge, water reuse, and wastewater recycling structures
- Waste treatment systems

With non-tidal waters, in the absence of adjacent wetlands, the extent of USACE jurisdiction extends to the ordinary high water mark (OHWM) – the line on the shore established by fluctuations of water and indicated by a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, or the presence of litter and debris. Wetlands are defined in 33 CFR Part 328 as:

> *"those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."*

Federal and state regulations pertaining to waters of the U.S., including wetlands, are discussed below.

Clean Water Act (33 USC 1251-1376). The CWA provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters.

Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of CWA. The Regional Water Quality Control Board (RWQCB) administers the certification program in California and may require State Water Quality Certification before other permits are issued.

Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material) into waters of the U.S.

Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special aquatic sites only if there is no practicable alternative that would have less adverse impacts.

Regional Water Quality Control Board

Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also obtain a CWA Section 401 Water Quality Certification. The State of California Water Quality Certification (WQC) Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990

under the requirements stipulated by Section 401 of the Federal CWA. Although the Clean Water Act is a Federal law, Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water quality standards. In California, under Section 401, the State and Regional Water Boards are the authorities that certify that issuance of a federal license or permit does not violate California's water quality standards (i.e., that they do not violate Porter-Cologne and the Water Code). The WQC Program currently issues the WQC for discharges requiring USACE's permits for fill and dredge discharges within Waters of the United States, and now also implements the State's wetland protection and hydromodification regulation program under the Porter Cologne Water Quality Control Act.

On April 2, 2019, the SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. The Office of Administrative Law approved the Procedures on August 28, 2019, and the Procedures became effective May 28, 2020.

Under the Procedures and the State Water Code (Water Code §13050(e)), "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state." Unless excluded by the Procedures, any activity that could result in discharge of dredged or fill material to Waters of the State, which includes Waters of the U.S. and non-federal Waters of the State, requires filing of an application under the Procedures.

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 et seq.) is California's statutory authority for the protection of water quality in conjunction with the federal CWA. The Porter-Cologne Act requires the SWRCB and RWQCBs under the CWA to adopt and periodically update water quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements, National Pollution Discharge Elimination System (NPDES) permits, Section 401 water quality certifications, or other approvals.

2.4.2 California Department of Fish and Wildlife

The CDFW is a trustee agency that has jurisdiction under Section 1600 et seq. of the California Fish and Game Code. Under Sections 1602 and 1603, a private party must notify CDFW if a proposed project will "substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of streambeds…except when the department has been notified pursuant to Section 1601." Additionally, CDFW asserts jurisdiction over native riparian habitat adjacent to aquatic features, including native trees over four inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures. Generally, CDFW recommends submitting an application for a Streambed Alteration Agreement (SAA)

for any work done within the lateral limit of water flow or the edge of riparian vegetation, whichever is greater.

3.0 STUDY METHODS

Studies conducted in preparation of this BTR included a desktop evaluation and background research to identify special-status species and other biological resources (e.g., wetlands) with the potential to occur on the project site or be impacted by the proposed project as well as biological field surveys to document baseline conditions and special-status species and/or their habitats present on the site. These methods are presented in the following sections.

3.1 SPECIAL-STATUS SPECIES EVALUATION

For the purposes of this BTR, special-status species are those that fall into one or more of the following categories:

- Listed as endangered or threatened under the FESA, including candidate species and species proposed for listing;
- Listed as endangered or threatened under the CESA, including candidate species and species proposed for listing;
- Designated as a Species of Special Concern (SSC) or watch-list (WL) species by the CDFW, or "Fully Protected" under the California Fish and Game Code (FP);
- Designated as California Rare Plant Rank 1A, 1B, 2A, 2B, or 3.

The most current available lists of special-status species known to occur and/or having the potential to occur in the project region were reviewed to determine those species' potential to occur on the project site or otherwise be affected by project activities. The following databases were queried, and the results are included in Appendix B:

- The San Francisco Bay – Delta Fish and Wildlife Office list of threatened and endangered species that may occur in the project site and/or may be affected by the project (USFWS 2021);
- The California Native Plant Society list of special-status plants documented in the "*Hayward, Dublin, Redwood Point, Newark, Niles, Palo Alto, Mountain View, Milpitas, and Newark"* quads (CNPS 2021); and
- The California Natural Diversity Database (CNDDB) list of special-status species documented in the "*Hayward, Dublin, Redwood Point, Newark, Niles, Palo Alto, Mountain View, Milpitas, and Newark"* quads (CDFW 2021).

Appendix C presents the general habitat requirements, status, the potential for the species to occur; and rationale for each species evaluated. Species determined to have no potential to occur on the project site or be otherwise affected by activities on the site were excluded from further evaluation. Species having potential to occur on the project site and/or be affected by site activities are evaluated in detail in Chapter 5 of this BTR.

3.2 BIOLOGICAL SURVEYS

Biological surveys conducted at the project site for this BTR by HELIX consisted of biological reconnaissance surveys, two seasons of protocol-level burrowing owl surveys, a tree inventory, and a special-status plant survey. The study area for these surveys included the Hetch Hetchy ROW. In addition, a wetland delineation was conducted for the project site and vicinity by WRA, Inc. These surveys are described in the following sections and summarized in Table 1 below.

3.2.1 Biological Reconnaissance

Biological reconnaissance surveys were conducted on April 4, 2019, February 28 and June 3, 2020, and April 26, 2021 to verify current site conditions. The surveys included a pedestrian reconnaissance of the entire project site, mapping of habitats and land covers, and a comprehensive list of all plant and animal species observed or detected. Although not protocol level surveys, biological reconnaissance surveys included a search for target plant and animal species, including burrowing owl and rare plants. Species lists were updated during subsequent site visits described below. A list of plant and animal species observed during all site visits is provided in Appendix D.

Table 1
BIOLOGICAL SURVEYS CONDUCTED FOR THE PROPOSED PROJECT

Survey Dates	Personnel - Company	Tasks Performed
May 5, 2009	Spencer Badet - WRA Justin Semion - WRA	Jurisdictional delineation
April 4, 2019	Stephen Stringer, M.S.- HELIX	General biological reconnaissance survey, tree inventory, burrowing owl habitat assessment; focused botanical survey
May 2, 2019	Patrick Martin – HELIX Stephanie McLaughlin, M.S. - HELIX	Burrowing owl habitat assessment
May 23, 2019	George Aldridge, Ph.D. - HELIX	Burrowing owl habitat assessment; focused botanical survey
June 18, 2019	Stephen Stringer, M.S. - HELIX	Burrowing owl habitat assessment; focused botanical survey
February 28, 2020	Patrick Martin - HELIX	General biological reconnaissance survey, protocol burrowing owl survey
May 13, 2020	Stephanie McLaughlin, M.S. - HELIX	Protocol burrowing owl survey
June 3, 2020	Stephen Stringer, M.S. - HELIX	Biological reconnaissance survey
April 26, 2021	Stephanie McLaughlin, M.S. - HELIX	Biological reconnaissance survey

3.2.2 Focused Botanical Surveys

HELIX biologists conducted focused botanical surveys on April 4, May 23, and June 18, 2019. They surveyed the entire project site on foot, documenting all plant species present. These dates span the blooming seasons of all regionally-occurring special-status plant species returned in database queries and reported in Appendix B.

3.2.3 Burrowing Owl

HELIX biologists conducted a protocol-level survey for burrowing owl (*Athene cunicularia*) in 2019 according to CDFW (2012) guidelines. The survey included a burrowing owl habitat assessment on April 4, 2019, and subsequent visits on May 2, 2019, May 23, 2019 and June 18, 2019. Protocol burrowing owl surveys were repeated in 2020 on February 28th and May 13th. The site was assessed for presence of suitable burrows and foraging habitat, abundance of prey, and sign of burrowing owl occupancy. Suitable burrows are holes or crevices greater than 3-inches diameter and are typically located on a mound or gentle slope, or near a post or other low perch. Suitable foraging habitat is open areas with sparse, low-growing vegetation that allows burrowing owls to see prey from low perches and hunt in low, horizontal flight. The most common mammal associated with burrowing owl is California ground squirrel (*Otospermophilus beecheyi*). Signs of burrowing owl presence include pellets, bones, whitewash, and litter collected around burrow entrances and under perches. During all surveys, all mounds, posts, hummocks, banks, debris piles, and other prominent features were closely inspected for sign of burrowing owl.

3.2.4 Tree Inventory

A HELIX staff arborist conducted a tree inventory and Level 1 visual assessment of trees in the project site on April 4, 2019. The inventory included all plants in the project site that meet the definition of tree in Chapter 18.16 of the Newark municipal code (i.e., a live woody perennial with at least one stem measuring 6 inches or greater diameter at 4.5 feet above grade). The results of this survey are included in Appendix E.

3.3 JURISDICTIONAL DELINEATION OF WETLANDS AND OTHER WATERS

WRA Environmental Consultants mapped aquatic resources on the site and surrounding area (known as FMC Central Plant) and prepared a Delineation of Potential Jurisdictional Wetlands and "Other Waters" Under Section 404 of the Clean Water Act in April 2013 (WRA 2013). The results are summarized in Section 5.2.

4.0 RESULTS: ENVIRONMENTAL SETTING

4.1 EXISTING LAND USE AND SETTING

The project site is a former industrial chemical plant that was active until the 1990s. Following ongoing soil remediation activities, the site is barren except for some remnant cement pads and cement and asphalt roads. At the time of the biological reconnaissance survey on April 26, 2021, remediation was ongoing in the western portion of the site. The project site is located within a former industrial area that is rapidly being converted to mixed residential uses. The project site is bound on the north by the San Mateo Transit District (SamTrans) railroad corridor and industrial development beyond, to the east by a vacant parcel planned for development, and to the south and west by residential and mixed-use development currently under construction.

4.2 TOPOGRAPHY

Terrain in the project site and surrounding area has been altered by industrial development, and most existing topographic relief is the result of fill for the railroad and industrial pads, excavation of artificial basins and channels, and diking of tidelands. The project site consists of leveled industrial pads and road and railroad embankments. Terrain in the area surrounding the project site is flat. Elevations on the project site are between 9 feet and 12 feet (NGVD29) from west to east.

4.3 HYDROLOGY

The project site falls within the Plummer Creek-Frontal San Francisco Bay Estuaries watershed (HUC12 180500040702). Plummer Creek is a tidal channel 0.5-mile south of the project site that is connected to San Francisco Bay approximately 2.3 miles westward via Newark Slough. There are no waterways on the project site that directly connect to Plummer Creek or Newark Slough. Precipitation is the only source of water for the project site. Elevations are generally lowest at the west, and there is no clear pattern of drainage. According to the USGS T-sheets for this area (www.sfei.org/tsheets/), the site is outside the historic boundary of tidal marshes in San Francisco Bay.

4.4 SOILS

The study area includes two soil mapping units in two soil series (NRCS 2021): Pescadero Clay, drained; and Marvin silt loam, saline-alkali. The western side of the project site is mapped as Pescadero Clay, drained; and the eastern side of the project site is mapped as Marvin silt loam, saline-alkali (Appendix A, Figure 5). Much of the surface soil on the site has been disturbed and/or removed due to soil remediation.

4.4.1 Pescadero Clay, Drained (133)

Pescadero Clay soils are composed of 85 percent Pescadero and similar soils, and 15 percent minor components (Willows and Omni). The Pescadero clay component is characterized by poorly drained alluvial soils derived from sedimentary rock, and typically occurs on nearly level basin rims at elevations of 0 to 100 feet above mean sea level (amsl). The typical depth to a restrictive layer is more than 80 inches, and the depth to the water table is approximately 48 to 72 inches.

A typical profile of this soil is clay loam from a depth of 0 to 2 inches, clay from a depth of 2 to 30 inches, and clay loam from a depth of 30 to 60 inches. The frequency of flooding in this soil type is classified as “none” and the frequency of ponding is classified as “none.” Pescadero clay, drained and its minor components are listed as a hydric soil on basin floors and rims in Alameda County on the national hydric soils list (NRCS 2019).

4.4.2 Marvin Silt Loam, Saline-alkali (125)

Marvin silt loam soils are composed of 85 percent Marvin and similar soils and 15 percent minor components (Pescadero and Willows). The Marvin component is characterized by somewhat poorly drained alluvial soils derived from sedimentary rock, and typically occurs on stream terraces at elevations from 10 to 100 feet amsl. The typical depth to a restrictive layer is more than 80 inches, and the depth to the water table is approximately 42 to 72 inches.

A typical profile of Marvin silt loam is silt loam from 0 to 4 inches; clay from 4 to 36 inches and clay loam from 36 to 60 inches. The frequency of flooding and ponding in this soil is classified as "none". Marvin silt loam and its minor components are listed as a hydric soil on basin floors in Alameda County on the national hydric soils list (NRCS 2019).

4.5 VEGETATION COMMUNITIES AND LAND COVER

The site contains no natural biological communities. Following extensive soil remediation that included the export of contaminated soils and import of clean fill, the majority of the site is disturbed, but is vegetated by weedy species typical of the region. Soil remediation is on-going in the western portion of the site (see Photo 4 in Appendix F). Currently, the project site supports three vegetation communities/land covers: ruderal/disturbed, developed and seasonal wetland (Table 2 below). The majority of the plant species on the site are non-native (Appendix D). Refer to Appendix A, Figure 6 for the distribution of the habitat types on the site. Site photos are in Appendix F.

Table 2
EXISTING VEGETATION COMMUNITIES AND LAND COVER TYPES IN THE PROJECT SITE

Vegetation Community/Land Cover Type	Area (acres)
Ruderal/Disturbed	16.39
Developed	5.72
Seasonal Wetland	0.015
TOTAL	**22.1**

4.5.1 Ruderal/Disturbed

Ruderal/disturbed habitat occurs in areas that are heavily disturbed by past or ongoing human activities but retain a soil substrate. Ruderal/disturbed areas may be sparsely to densely vegetated, but do not support a recognizable community or species assemblage. Vegetative cover is usually herbaceous and dominated by a wide variety of weedy non-native species or a few ruderal native species. This habitat in the project site is either unvegetated post-remediation or heavily dominated by a dense cover of non-native annual grasses, with small patches of native and non-native grasses and forbs. Portions of this habitat are still subject to on-going remediation in the western portion of the site.

Ruderal/disturbed habitat provides low-quality habitat for wildlife, typically supporting only transient individuals using the area for dispersal, because of the sparse vegetation and lack of species diversity. Ruderal/disturbed habitat in the project site supports a large population of rodents such as Botta's pocket gopher (*Thomomys bottae*) and California ground squirrel (*Otospermophilus beecheyi*), which in turn provide a prey base and suitable burrow habitat for special-status birds of prey (burrowing owl) that could occur in the project site.

4.5.2 Developed

Developed areas in the project sited consist of areas that are graveled, paved or supported buildings with associated ornamental vegetation. Developed areas in the project site are scattered throughout the project site interspersed with ruderal/disturbed habitat. The developed areas consist of paved areas with asphalt or concrete and are either former foundations for structures that are no longer present or remediation sites. Graveled and paved roads also occur in the project site. These areas are heavily

disturbed and consist mostly of bare ground, paved surfaces and/or landscaped vegetation. Landscaped vegetation may provide habitat for wildlife such as nesting birds.

Developed habitat provides low-quality habitat for wildlife, typically supporting only transient individuals using the area for dispersal, because of the sparse vegetation and lack of species diversity. California ground squirrels were observed burrowing in developed habitat, especially in areas paved with asphalt. Burrows in asphalt seemed to originate from cracks in the asphalt or along the margins of the asphalt. Burrows in developed habitat could provide habitat for special-status species such as burrowing owl.

4.5.3 Seasonal Wetland

There is one seasonal wetland in the project site, which occurs within a constructed ditch formed as a result of former construction activity that holds water for sufficient duration to form wetland conditions. The seasonal wetland contains facultative (FAC) and facultative wetland (FACW) hydrophytic species such as salt grass (*Distichlis spicata*) and rabbit's foot grass (*Polypogon monspeliensis*).

The seasonal wetland on the site provides low-quality habitat for wildlife, typically supporting only transient individuals using the area for dispersal, because of the sparse vegetation and lack of species diversity. Waterfowl and other wildlife were observed using the small wetland.

4.6 WILDLIFE

Wildlife observed on the project site were common urban species tolerant of human presence, such as California ground squirrel, black phoebe (*Sayornis nigricans*), red-tailed hawk (*Buteo jamaicensis*), American crow (*Corvus brachyrhynchus*), Canada goose (*Branta canadensis*), killdeer (*Charadrius vociferous*), western meadowlark (*Sturnella neglecta*), and gray fox (*Urocyon cinereoargenteus*). Special-status species observed flying overhead during biological surveys include white-tailed kite (*Elanus leucurus*) and golden eagle (*Aquila chrysaetos*), both of which are CDFW fully protected species. Both birds were observed foraging and quickly passed over the site.

5.0 DISCUSSION: EVALUATION OF BIOLOGICAL RESOURCES

5.1 SENSITIVE NATURAL COMMUNITIES

No upland or aquatic natural communities in the project site were identified as a sensitive or special-status natural community. Developed lands and ruderal/disturbed areas are not considered sensitive and have low potential to support special-status species. The seasonal wetland in the project site occurs within a constructed ditch resulting from former construction activity and is associated with the disturbed habitats of the project site. Due to sparse vegetation and lack of species diversity, the seasonal wetland on the site provides low-quality habitat for wildlife, typically supporting only transient individuals using the area for dispersal. The seasonal wetland on the site is not considered a sensitive natural community.

5.2 POTENTIAL JURISDICTIONAL WATERS

There is one seasonal wetland in the project footprint totaling 0.015 acre (Table 3). This feature is referred to as seasonal wetland "C" in the delineation prepared in April 2013 by WRA Environmental Consultants (WRA 2013). Seasonal wetlands "D", "E", "F", and "G" delineated by WRA in the project vicinity are located in the Hetch Hetchy ROW or along the neighboring SamTrans train tracks and are not on the project site. These features will not be impacted by the proposed project. Seasonal wetland "H" delineated by WRA no longer exists, presumably due to ongoing soil remediation or other site disturbances.

Table 3
AQUATIC RESOURCES IN THE PROJECT SITE

Feature Name	Cowardin Classification	Area (ac)
Seasonal Wetland C	PEMx (Palustrine, emergent, excavated)	0.015
	TOTAL AQUATIC RESOURCES	**0.015**

5.2.1 Potential Waters of the U.S.

Seasonal wetland "C" occurs within a remnant of a constructed ditch that is unlined and ponds water as a result of the soil type and the high amount of disturbed material found within the soil (WRA 2013). The constructed ditch is a man-made ditch/depression left over from industrial activities on the site. WRA concluded that the seasonal wetland is isolated, as no connection to navigable waters was apparent and that federal regulations exclude drainage features excavated in uplands. For these reasons, the seasonal and isolated wetland was considered non-jurisdictional and exempt from Section 404 jurisdiction by WRA (WRA 2013). This finding is consistent with the *Navigable Waters Protection Rule: Definition of "Waters of the United States"*, which generally exempts ditches from jurisdiction that are not traditional navigable waters, tributaries, isolated features, or that are not constructed in adjacent wetlands.

5.2.2 Potential Waters of the State

According to the *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* adopted April 2, 2019 that went into effect on May 28, 2020, artificial wetlands less than one acre in size are not waters of the State unless they resulted from historic human activity, are not subject to ongoing operation and maintenance, and have become a relatively permanent part of the natural landscape. The seasonal wetland on the site was constructed in uplands (WRA 2013) and is considered artificial. The seasonal wetland is subject to ongoing operation and maintenance including soil remediation in the immediate vicinity, mowing and vegetation maintenance. Therefore, seasonal wetland "C" does not qualify as a waters of the State based on the delineation report (WRA 2013) and the State Wetland Definition.

5.2.3 CDFW Jurisdictional Areas

Section 1600 et seq. of the Fish and Game Code regulates activities affecting rivers, streams, and lakes where fish or wildlife resources may be adversely affected. A lake under CDFW jurisdiction is defined as "a permanent natural body of water of any size or an artificially impounded body of water of at least one acre, isolated from the sea, and having an area of open water of sufficient depth and permanency

to prevent complete coverage by rooted aquatic plants" (CCR Vol. 18 Title 14, Section 1562.1). Streambeds within CDFW jurisdiction are based on the definition of a stream as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life" (CCR Vol. 18 Title 14, Section 1.72).

Seasonal wetland "C" is not consistent with the definition of streams or lakes and is not regulated by the CDFW. No habitat potentially regulated by CDFW occurs in the project site.

5.2.4 Impacts to Aquatic Resources

The project will result in permanent impacts to seasonal wetland "C", which totals 0.015 acre in size. As discussed in the preceding paragraphs, this seasonal wetland does not qualify as a waters of the U.S. or waters of the State and is not subject to CDFW jurisdiction under Section 1600 et seq. of the Fish and Game Code. No mitigation is required for impacts to this non-jurisdictional aquatic resource.

5.3 SPECIAL-STATUS SPECIES

Database queries for regionally occurring special-status species are included in Appendix B. The habitat affinities of each of these species were compared to the habitats present in the project site to determine the potential for each of these species to occur in the project site (Appendix C). Two special-status animal species were determined to have the potential to occur in the project site or otherwise be affected by development of the proposed project (Table 4). In addition, salt marsh harvest mouse is discussed in this section due to requirements of the MMRP in the Bayside Newark TOD Specific Plan EIR, although it has no potential to occur in the project site or be impacted by the proposed project.

Table 4
REGIONAL SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT SITE

Scientific Name/ Common Name	FESA/CESA/ CRPR or Other State Status*	Habitat Suitability
Birds		
Athene cunicularia burrowing owl	--/--/SSC	There is marginal suitable habitat in the project site consisting of foraging habitat and ground squirrel burrows for nesting. This species has been documented on or adjacent to the site in the CNDDB.
Elanus leucurus white-tailed kite	--/--/FP	There is potential habitat for nesting and foraging in the project site. This species was observed on site and an old nest that could provide habitat is present on site.

*SSC – state species of special concern; FP – state fully protected

5.3.1 Special-Status Animals

Habitat is present in the project site for burrowing owl and white-tailed kite, special-status bird species analyzed in Appendix C.

5.3.1.1 Burrowing Owl (*Athene cunicularia*)

Federal Status – None
State Status – SSC
Other – None

Burrowing owls are often found in open, dry grasslands, agricultural and range lands, and desert habitats. They can also inhabit grass, forb, and shrub stages of pinyon and ponderosa pine habitats. Burrowing owls occur at elevations ranging from 200 feet below mean sea level to over 9,000 feet amsl. In California, the highest elevation where burrowing owls are known to occur is 5,300 feet amsl in Lassen County. In addition to natural habitats, burrowing owls can be found in urban habitats such as at the margins of airports and golf courses and in vacant urban lots. Burrowing owls nest in burrows and commonly perch on nearby fence posts or mounds. The owls also use ground squirrel burrows, badger dens or artificial burrows such as abandoned pipes or culverts (CDFW 2012).

Although the more northern burrowing owl populations migrate seasonally, burrowing owls are year-round residents in much of California. The owls often form loose colonies, with nest burrows 46 to 2,952 feet apart (ICF 2012). The nesting season for burrowing owl can begin as early as February 1 and continues through August 31. Burrowing owls forage in adjacent grasslands and other suitable habitats with low vegetation primarily for insects and small mammals, and less often for reptiles, amphibians, and other small birds.

Survey History

All biological surveys included searching for burrowing owls, including transects of the site on April 4, 2019. Protocol surveys were conducted on May 2, May 23, and June 18, 2019. Protocol burrowing owl surveys were reconducted on February 28, 2020 and May 13, 2020. In addition, biological reconnaissance surveys that included searching for burrowing owl and/or sign were conducted on June 3, 2020 and April 26, 2021. Burrowing owls, burrows or sign have not observed on the project site during any of the surveys. All burrows were either abandoned, collapsed or occupied by California ground squirrels or gray fox. Potential perch sites, such as bollards were also inspected, however no indication of burrowing owl using the site was detected.

The nearest documented occurrence in CNDDB of burrowing owl is located approximately 1/2 mile north of the project site. The occurrence is from 1950 and is presumed to be extirpated. The occurrence considers the conversion of vacant fields to developments a possible cause and notes a steady decline of burrowing owls in Newark (CDFW 2020. There is another reported occurrence approximately 0.5 mile northwest from 1978 and 1979 (CDFW 2020). In addition, this species was documented on site on January 17, 2012 in an unprocessed CDFW record (CDFW 2020). The record states that burrowing owl was observed foraging, and it does not identify any occupied burrows.

Habitat Suitability/Potential to Occur in the Project Site

The project site provides suitable nesting, foraging and wintering habitat for this species. However, due to the high level of noise and human presence on the site due to ongoing remediation as well as in the immediate vicinity of the site resulting from the surrounding development activities, the site is not highly suitable for burrowing owl. The project site contains several California ground squirrel burrows that could be used by burrowing owl for nesting or stopover during winter migration. California ground squirrel burrows are scattered all over the site, with most burrows located adjacent to the site within

the Hetch Hetchy ROW. Burrows are also present along the edge of compromised paved surfaces and along other dirt berms. No burrowing owls or sign (whitewash, feathers, pellets) were detected during protocol surveys or any other biological surveys. All burrows appeared to be occupied by California ground squirrel or vacant.

Potential Project Impacts

Although the site provides some suitable foraging and potential mammal burrows for burrowing owl, no burrowing owl or active burrows have been observed on the project site during two seasons of protocol surveys and other biological surveys and the site is subject to a relatively high amount of noise disturbance and human presence on site due to ongoing remediation and in the immediate vicinity due to surrounding development activities. HELIX biologists have observed burrowing owl foraging or using burrows temporarily on several sites within the Bayside Newark TOD Specific Plan area but have not observed nesting or long-term occupancy of burrowing owl within site in the area, likely due to the high level of disturbance. It is unlikely that burrowing owl would occupy the site prior to development, but burrowing owl could occasionally use the site for foraging or temporary refugia.

The loss of 16.39 acres of potential foraging habitat within the ruderal/disturbed habitat onsite would not be expected to significantly impact burrowing owl. Higher quality foraging habitat is abundant to the west and north of the site. Burrowing owl is a highly mobile bird species and individual birds foraging or otherwise occurring in the site could readily avoid construction areas or contact with construction equipment or personnel. Therefore, no impacts to individual foraging or transient burrowing owls is anticipated. However, because the potential for burrowing owl to take up residence in the site prior to construction cannot be ruled out, especially if the site were to remain dormant for several weeks or more during the winter, potential disturbance to burrowing owl individuals could occur as a result of construction activities (e.g., noise, human presence).

The recommended mitigation measures for burrowing owls contained in Section 6.1.1.2 would reduce any potential impacts to burrowing owl to less than significant.

5.3.1.2 White-tailed Kite (*Elanus leucurus*)

Federal Status – None
State Status – Fully Protected
Other – None

White-tailed kite is a year-round resident in California in coastal areas and lowlands in the Central Valley. Population sizes increase during the non-breeding season due to over-wintering migrants. Population also changes with the availability of prey, which may follow prey abundance. White-tailed kite prefers open stages of habitats dominated by herbaceous species (Zeiner et al. 1990). White-tailed kite will nest in tall trees adjacent to foraging habitat (Zeiner et al. 1990). White-tailed kites feed mainly on small mammals such as voles (*Microtus* spp.) but will take other small vertebrate and invertebrate prey.

Survey History

A pair of white-tailed kites was observed in the project site during biological surveys on April 4, 2019. The pair was observed defending their territory from one red-tailed hawk, which was driven away from the project site by both kites. No active nests were observed in or adjacent to the project site, although

suitable nest trees are present in the project site. One old nest was observed in a pine tree along the southern boundary of the project site, which could be an old kite nest, but is likely being used by an American crow. White-tailed kites were observed on the project site again during the biological survey on February 28, 2020.

The nearest reported occurrences in CNDDB of white-tailed kite is located approximately 1.5 miles north of the project site. The occurrence is from 1971 and is presumed to be extant (CDFW 2020). The occurrence documents white-tailed kite nesting in a deciduous tree (CDFW 2020).

Habitat Suitability/Potential to Occur in the Project Site

The project site provides suitable foraging habitat for this species, but white-tailed kite is unlikely to nest in the site. This species was documented on site on April 4, 2019 during the general biological survey and was observed again in February 2020. The project site contains a few trees tall enough for nesting and one old nest suitable for white-tailed kite was observed in a pine tree on the southern boundary of the project site along Enterprise Drive. However, remediation is ongoing on the site in the vicinity of the potential nest trees and properties adjacent to the project site are currently being developed with constant activity and disturbance from heavy machinery and personnel. The pair of white-tailed kites observed during the survey did not appear to be nesting onsite even though they displayed territorial behaviors, they only appeared to be foraging. The pair was likely nesting somewhere near the project site and occasionally using the site for foraging.

Potential Project Impacts

White-tailed kite is a highly mobile bird species and individual birds foraging or otherwise occurring in the site could readily avoid construction areas or contact with construction equipment or personnel. Therefore, no impacts to individual foraging kites is anticipated. The loss of 16.39 acres of potential foraging habitat within the ruderal/disturbed habitat onsite would not be expected to significantly impact white-tailed kites nesting in the region. Higher quality foraging habitat is abundant to the west and north of the site. It is considered unlikely that white-tailed kite would nest in or immediately adjacent to the site, however, this potential cannot be completed ruled out. If white-tailed kite were to nest in or adjacent to the site prior to construction activities, noise, vibration, human presence, and other construction-related disturbances could disturb nesting kites and potentially result in nest failure or lead to the abandonment of eggs or young.

The recommended mitigation measures for nesting raptors contained in Section 6.1.1.1 would reduce potential impacts to nesting white-tailed kite to less than significant.

5.3.1.3 Salt Marsh Harvest Mouse (*Reithrodontomys raviventris*)

Federal Status – Endangered
State Status – Endangered
Other – None

The salt marsh harvest mouse was federally listed as endangered in its entire range on October 13, 1970 (Federal Register 35: 16047). Critical habitat has not been designated for this species. This mouse is also state listed as endangered. A recovery plan for the salt marsh harvest mouse was prepared in 1984 and is currently under revision.

The salt marsh harvest mouse is endemic to tidal and brackish marsh habitats of the San Francisco Bay region. Salt marsh harvest mice are primarily found in the salt marshes along northern San Pablo Bay, surrounding Suisun Bay, and along southern San Francisco Bay USFWS 1984). The acreage believed to be necessary to sustain a healthy salt marsh harvest mouse population is 150 acres or more (USFWS 2010). The salt marsh harvest mouse is critically dependent on dense cover and its preferred habitat is considered to be pickleweed-dominated salt marsh wetlands. Studies have found salt marsh harvest mice occur not only in tidal wetlands dominated by pickleweed, but also in wetlands with little or no pickleweed, in diked wetlands, and in transition zones dominated by annual grasses. However, the extent to which salt marsh harvest mice depend upon these habitats has not been explicitly quantified (Sustaita et al. 2011). Recent studies have also shown that salt marsh harvest mice are more flexible in habitat use and with their diet than previously thought (Smith and Kelt 2019). Salt marsh harvest mice will use non-native plant species, such as rabbitsfoot grass (*Polypogon monspeliensis*) in their diet (Smith and Kelt 2019) in addition to other native species and are not tied exclusively to pickleweed-dominated wetlands but will also use other mixed vegetation wetlands (Sustaita et al. 2011). This shows that salt marsh harvest mice may use mixed vegetation salt marsh habitat (Sustaita et al. 2011; Smith et al. 2014).

In marshes with an upper zone of halophytes in the intertidal zone, salt marsh harvest mice will use the tall vegetation to escape high tides and may also move into adjoining grasslands during the highest winter tides especially in areas with shorter emergent salt marsh habitat (Sustaita et al. 2011; Smith et al. 2014). During a live trapping study that used radio telemetry, the trapping study found that salt marsh harvest mice rarely used upland areas with annual grasses but preferred to stay in taller vegetation in the intertidal zone during high tide (Smith et al. 2014). The best type of pickleweed association for the species has 100 percent vegetative cover with a cover depth of 30 to 50 centimeters at summer maximum, at least 60 percent cover of pickleweed, and additional halophytes such as fat hen (*Atriplex patula*) and alkali heath (*Frankenia salina*). The amount of salt grass, brass buttons (*Cotula coronopifolia*), alkali bulrush (*Bolboschoenus maritimus*), or other species (e.g., *Schoenoplectus* sp. or *Typha* sp.) should be low (USFWS 1984).

The Salt Marsh Harvest Mouse and California Clapper Rail Recovery Plan (USFWS 1984) lists five principal reasons for the decline of the salt marsh harvest mouse: (1) habitat loss, (2) fragmentation of the remaining marshes, (3) widespread loss of the high marsh zone as a result of backfilling, (4) land subsidence, and (5) vegetational change. It further points out that small marshes, separated by open land or dikes, have very low immigration, and that very few areas are likely to be recolonized.

Survey History

A habitat assessment for salt marsh harvest mouse was conducted by a salt marsh harvest mouse-permitted biologist in accordance with the requirements of the Bayside Newark TOD EIR MMRP (Appendix G).

Habitat Suitability/Potential to Occur in the Project Site

The project site and immediate vicinity does not contain suitable habitat for salt marsh harvest mouse. Refer to the habitat assessment for salt marsh harvest mouse in Appendix G for further discussion.

Potential Project Impacts

There is no suitable habitat for salt marsh harvest mouse on or immediately adjacent to the project site and no potential for salt marsh harvest mouse to occur within the project boundaries or be impacted by the project.

5.3.2 Nesting Migratory Birds and Raptors

Native birds are protected by the California Fish and Game Code, which prohibits direct take of adults, nests, eggs, and chicks. Disturbance that leads to nest abandonment can be considered take of eggs and chicks. Common bird species found on the project site include species that nest on all types of substrata, including bare ground, herbaceous and woody vegetation, pipes, debris, poles, and structures.

Potential nesting habitat is limited on the project site; however, the proposed project may include removal of vegetation that provides potential nesting habitat for nesting birds. Project construction activities would potentially result in impacts to nesting birds if construction of the proposed project commences during the typical nesting period for migratory birds. Construction activities and construction-related disturbance (noise, vibration and increased human activity) could adversely affect these species if they were to nest in or adjacent to the project area. Potential effects include physical destruction of nests by construction equipment and/or nest abandonment.

Construction of the proposed project would increase the number of people in close vicinity to potentially suitable nesting and foraging habitat for nesting birds. Similar to those identified for burrowing owl and white-tailed kite, associated potential impacts would include harassment from increased noise and activity in the vicinity of potentially suitable habitat, degradation of habitat from litter and light spillover from the nearby development, and the potential for increased depredation as a result of increased traffic from potential nest predators, such as feral cats, dogs, raccoons, foxes and other predatory domestic animals and wildlife associated with an urban setting.

The keeping of outside feline pets or feral cat feeding stations will be prohibited, thereby reducing the potential for cats to prey on or harass nesting birds in suitable habitat near the project site. Lighting will be designed consistent with Policy LU-6.6 of the City General Plan Land Use Element, and the Site and Architecture Design Guidelines contained in the Specific Plan which require that the lighting be designed to reduce glare and over-lighting impacts. As a result, potential indirect impacts to nesting passerines and other birds associated with light and glare would be reduced.

The recommended mitigation measures for nesting migratory birds contained in Section 6.1.1.3 would reduce impacts to nesting migratory birds to less than significant.

5.3.3 Special-Status Plants

Habitat for special-status plants on the site is not present since the site has been developed and it is currently disturbed with non-native and imported soil and paved surfaces. In addition, no special-status plant species have been documented on the site during focused botanical surveys or numerous other biological surveys. Therefore, special-status plants are presumed absent from the project site and no impacts to special-status plant species is anticipated. No mitigation measures are necessary for special-status plants.

5.4 PROTECTED TREES

A total of 34 trees meeting the size threshold for protection were identified on the project site; two of these are dead. The condition of the 32 live trees ranged from good to declining. Tree species present included Monterey pine (*Pinus radiata*), shamel ash (*Fraxinus uhdei*), carrotwood (*Cupaniopsis anacardioides*), cork oak (*Quercus suber*), coast live oak (*Quercus agrifolia*), and Mexican fan palm (*Washingtonia robusta*). A total of 32 trees meeting the City of Newark Municipal Code definition of protected trees were identified in the project site. These trees do not provide a windbreak on which a substantial number of people depend, and therefore are eligible for removal to facilitate development of the proposed project. A permit would likely be required from the City of Newark Public Works Director prior to removal, destruction, or transplantation of any trees included in the inventory. Details regarding the location and condition of the trees in the project site are provided in the arborist report in Appendix E.

The recommended mitigation measures for protected trees contained in Section 6.2 would reduce potential impacts to protected trees to less than significant.

6.0 DISCUSSION: GENERAL AVOIDANCE AND MITIGATION RECOMMENDATIONS

The mitigation measures in this section were adapted from pertinent measures in the EIR prepared for the Bayside Newark TOD Specific Plan (RBF 2011b). Below is a summary table of identified impacts and associated biological mitigation measures in the EIR for the Specific Plan (RBF 2011b) and whether or not they are applicable to the proposed project. Shaded impacts and associated mitigation measures in Table 5 below are applicable to the proposed project.

Table 5
SUMMARY OF BIOLOGICAL RESOURCE IMPACTS AND MITIGATION MEASURES FROM THE EIR AND APPLICABILITY TO THE PROPOSED PROJECT

Biological Resource Impact	Mitigation Measure	Applicable/Not Applicable
Impact BIO-4.3-1: Impacts to salt marsh harvest mouse	MM BIO-4.3-1	Not Applicable – no salt marsh or other habitat for this species in the project site
Impact BIO-4.3-2: Nesting Raptors	MM BIO-4.3-2	Applicable; included
Impact BIO-4.3-3: Burrowing owl	MM BIO-4.3-3	Applicable; included
Impact BIO-4.3-4: Nesting passerines	MM BIO-4.3-4	Applicable; included
Impact BIO-4.3-5: Special status plants	MM BIO-4.3-5	Not applicable – no habitat for special status plants present on the project site
Impact BIO-4.3-6: Wetland mitigation	MM BIO-4.3-6	Not applicable – no jurisdictional aquatic resources are present on the project site
Impact BIO-4.3-8: Impacts to protected trees	MM BIO-4.3-8	Applicable; included

6.1 SPECIAL-STATUS SPECIES

6.1.1 Special-Status Wildlife

6.1.1.1 Nesting Raptors

Section 4.3 of the Bayside Newark TOD Specific Plan EIR identified MM 4.3-2 to identify potentially significant impacts to nesting raptors within the Specific Plan area. The mitigation measure is relevant to the proposed project. The following avoidance and minimization measures shall be implemented prior to site disturbance to avoid impacts to nesting raptors and other migratory birds utilizing the project area or immediately adjacent properties, as required by MM 4.3-2 from the Specific Plan EIR.

- To avoid impacts on nesting raptors, a nesting survey shall be conducted on individual project site parcels prior to commencing with earth-moving or construction work if this work would occur during raptor nesting season (between February 1 and August 31). The raptor nesting survey shall include examination of all trees on or within 300 feet of the entire project site, not just trees slated for removal, since ground vibrations and noise from earth-moving equipment can disturb nesting birds and potentially result in nest abandonment.

- If nesting raptors are identified during the surveys, orange construction fence shall be installed to establish a 300-foot radius around the nest unless a qualified biologist determines that a lesser distance will adequately protect the nest (refer to discussion below for more detail). If the tree or nest is located off the project site, then the buffer shall be demarcated per the above where the buffer intersects the project site.

- The size of the non-disturbance buffer may be altered if a qualified raptor biologist conducts behavioral observations and determines the nesting raptors are well acclimated to disturbance. If this occurs, the raptor biologist shall prescribe a modified buffer that allows sufficient room to prevent undue disturbance/harassment to nesting raptors. If the buffer is reduced, the qualified raptor biologist shall remain onsite to monitor the raptors' behavior during heavy construction in order to ensure that the reduced buffer does not result in take of eggs or nestlings. No construction or earth-moving activity shall occur within the established buffer until it is determined by a qualified raptor biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones. This typically occurs by August 1. This date may be earlier or later and would have to be determined by a qualified raptor biologist. If a qualified biologist is not hired to monitor the nesting raptors, then the full 300-foot buffers shall be maintained in place from February 1 through the month of August. The buffer may be removed, and work may proceed as otherwise planned within the buffer on September 1.

6.1.1.2 Burrowing Owl

Section 4.3 of the Bayside Newark TOD Specific Plan EIR identified MM 4.3-3 to identify potentially significant impacts to burrowing owls within the Specific Plan area. If burrowing owl pair(s) or resident burrowing owl is observed during any of the pre-construction surveys, avoidance and compensatory mitigation would be required, as described below. The project specific mitigation presented below reflects revisions to MM 4.3-3 for consistency with the 2012 CDFW guidelines for preconstruction surveys and to address potential impacts to burrowing owls in the project site.

- Pre-construction surveys for western burrowing owl shall be conducted in accordance with the CDFW 2012 protocol by a qualified biologist prior to ground disturbance (including grading, clearing and grubbing, brush removal, or any other ground disturbance) as described below to ensure there are no impacts on burrowing owls because of the proposed project.

- The initial survey shall be conducted in the 30-day period prior to ground disturbance associated with the project, but no less than 14 days prior to the initiation of ground disturbance. Western burrowing owl surveys shall be conducted from two hours before sunset to one hour after, or one hour before to two hours after sunrise. All burrowing owl sightings, occupied burrows, and burrows with owl sign (e.g., pellets, excrement, and molt feathers) shall be counted and mapped. Surveys shall be conducted by walking all suitable habitat on the entire project area and (where possible) in areas within 150 meters (approximately 500 feet) of the project impact zone. The 150-meter buffer zone is surveyed to identify burrows and owls outside of the project area which may be impacted by factors such as noise and vibration (heavy equipment) during project construction. Pedestrian survey transects shall be systematically spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines shall be no more than 20 meters (approximately 100 feet) and shall be reduced to account for differences in terrain, vegetation density, and ground surface visibility. If no suitable burrowing owl habitat is present, no additional surveys will be required. If suitable burrows are determined to be present on the site, a qualified biologist will visit the site an additional three times to investigate whether owls are present where they could be affected by the proposed activities. The final survey shall be conducted within the 24-hour period prior to the initiation of construction.

- If burrowing owl is present during the non-breeding season (generally September 1 through January 31), a buffer of 50 meters (approximately 160 feet) shall be maintained around the occupied burrow(s), if practicable. If maintaining such a buffer is not feasible, then the buffer must be great enough to avoid injury or mortality of individual owls or the owls shall be passively relocated in coordination with CDFW. If burrowing owl is detected on the site during the breeding season (peak of the breeding season is April 15 through July 15), and appear to be engaged in nesting behavior, a fenced 250-foot buffer shall be required between the nest site(s) (i.e., the active burrow(s)) and any earth-moving activity or other disturbance in the project area. This 250-foot buffer could be decreased to 160 feet once it is determined by a qualified burrowing owl biologist that the young have fledged (that is, left the nest). Typically, the young fledge by August 31. This date may be earlier than August 31, or later, and would have to be determined by a qualified burrowing owl biologist.

- If burrowing owl is found on the project site, a qualified biologist shall delineate the extent of burrowing owl habitat on the site and a Mitigation Plan shall be prepared in consultation with CDFW for review and approval by the City. The Mitigation Plan shall identify the mitigation site and any activities proposed to enhance the site, including the construction of artificial burrows and maintenance of California ground squirrel populations on the mitigation site. In addition, for each pair of burrowing owls found in the construction area, two artificial nesting burrows shall be created at the mitigation site. The Plan shall also include a description of monitoring and management methods proposed at the mitigation site. Monitoring and management of any lands identified for mitigation purposes shall be the responsibility of the applicant for at least five years. An annual report shall be prepared for submittal to CDFW and the City by December 31 of each monitoring year. Contingency measures for any anticipated problems shall

be identified in the plan. Compensatory mitigation shall consist of providing six and a half acres of replacement habitat which shall be protected in perpetuity per pair of burrowing owls, or unpaired resident bird. Such a set-aside would offset permanent impacts on burrowing owl habitat. The protected lands shall be adjacent to occupied burrowing owl habitat if possible, and at a location selected in consultation with CDFW. Land identified to offset impacts on burrowing owls shall be protected in perpetuity by a suitable property instrument (e.g., a conservation easement or fee title acquisition).

6.1.1.3 Nesting Passerines and other Nesting Migratory Birds

Section 4.3 of the Bayside Newark TOD Specific Plan EIR identified MM 4.3-4 to identify potentially significant impacts to nesting passerines within the Specific Plan area. The mitigation measure is relevant to the proposed project. The following avoidance and minimization measures shall be implemented prior to site disturbance to avoid impacts to nesting passerines and other migratory birds utilizing the project area or immediately adjacent properties, as required by MM 4.3-4 from the Specific Plan EIR.

- To avoid impacts on nesting passerines and other migratory birds, a nesting survey shall be conducted in the project site and areas within 100 feet of the site prior to commencing initial earth-moving (including site remediation activities) or construction work if this work would occur during the passerine nesting season (between March 1 and September 1). Areas within 100 feet of the project site shall be surveyed on foot if accessible or from within the project site or publicly accessible areas by scanning the surrounding land with the aid of binoculars.

- The nesting surveys shall be completed approximately 15 days prior to commencing work. If special-status birds are identified nesting on or near the project site, a 100-foot radius around all identified active nests shall be demarcated with orange construction fencing to establish a non-disturbance buffer. If an active nest is found off site, the intersecting portion of the buffer that is on site shall be fenced. No construction or earth-moving activity shall occur within this 100-foot staked buffer until it is determined by a qualified biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones.

- If common (that is, not special-status) birds, for example, red-winged blackbird, are identified nesting on or adjacent to the project site, a non-disturbance buffer of 75 feet shall be established or as otherwise prescribed by a qualified biologist. The buffer shall be demarcated with orange construction fencing. Disturbance around an active nest shall be postponed until it is determined by the qualified biologist that the young have fledged and have attained sufficient flight skills to leave the area.

- Typically, most birds in the region of the project site are expected to complete nesting by August 1. However, in the region many species can complete nesting by the end of June or in early to mid-July. Regardless, nesting buffers shall be maintained until August 1 unless a qualified biologist determines that the young have fledged and are independent of their nests at an earlier date. If buffers are removed prior to August 1, the biologist conducting the nesting surveys shall prepare a report that provides details about the nesting outcome and the removal of buffers. This report shall be submitted to the City project planner and CDFW prior to the time that buffers are removed if the date is before August 1.

6.2 PROTECTED TREES

Section 4.3 of the Bayside Newark TOD Specific Plan EIR identified MM 4.3-8 to address potentially significant impacts to protected trees within the Specific Plan area. The mitigation measure is relevant to the proposed project. The following avoidance and minimization measures shall be implemented prior to removal of any protected trees, as required by MM 4.3-4 from the Specific Plan EIR.

The MMRP's measure 4.3-8 specifies that a tree permit shall be obtained from the City prior to the removal of any tree protected by City Ordinance on project sites. Replacement trees shall be planted at a 1:1 ratio (replacement tree per tree removed) in designated open space areas on the subject parcel. The measure contains specific requirements pertaining to monitoring, irrigation, and plan preparation for the replacement plantings.

If the trees in the study area are found to be protected under the City Ordinance, and will be removed for project development, mitigation measures shall be implemented in accordance with the MMRP.

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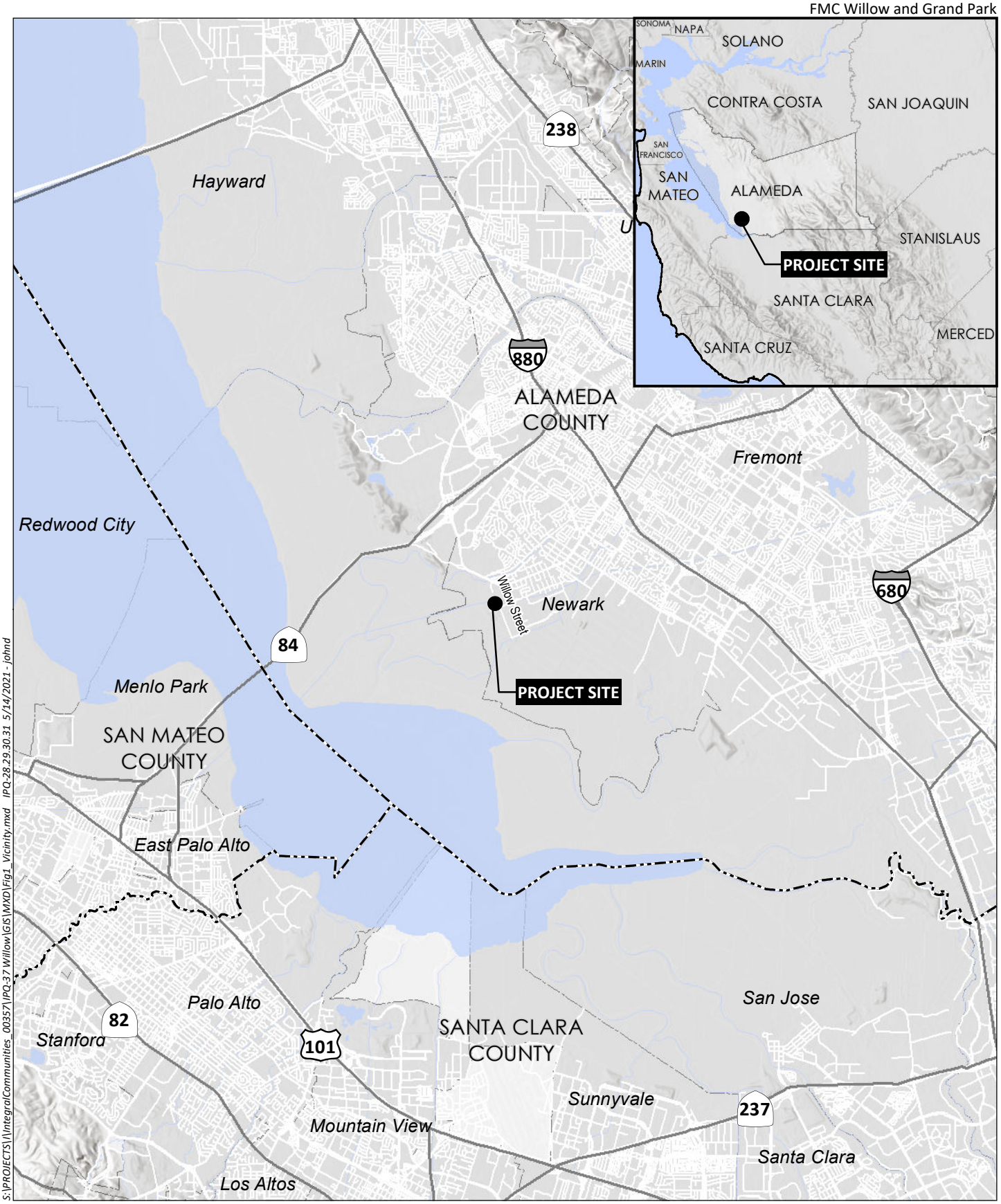
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Appendix A

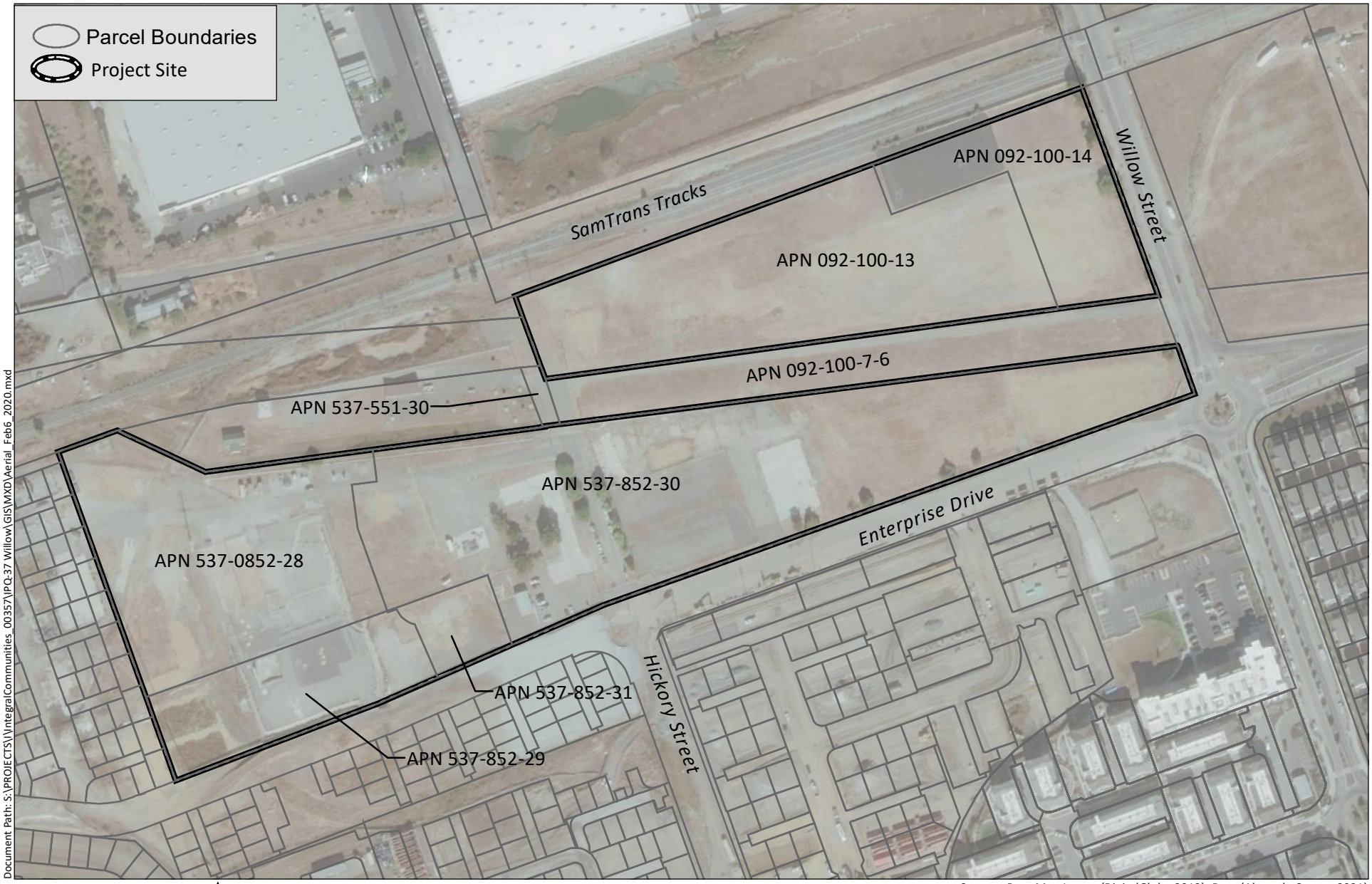
Figures



HELIX Environmental Planning

Vicinity Map

Figure 1



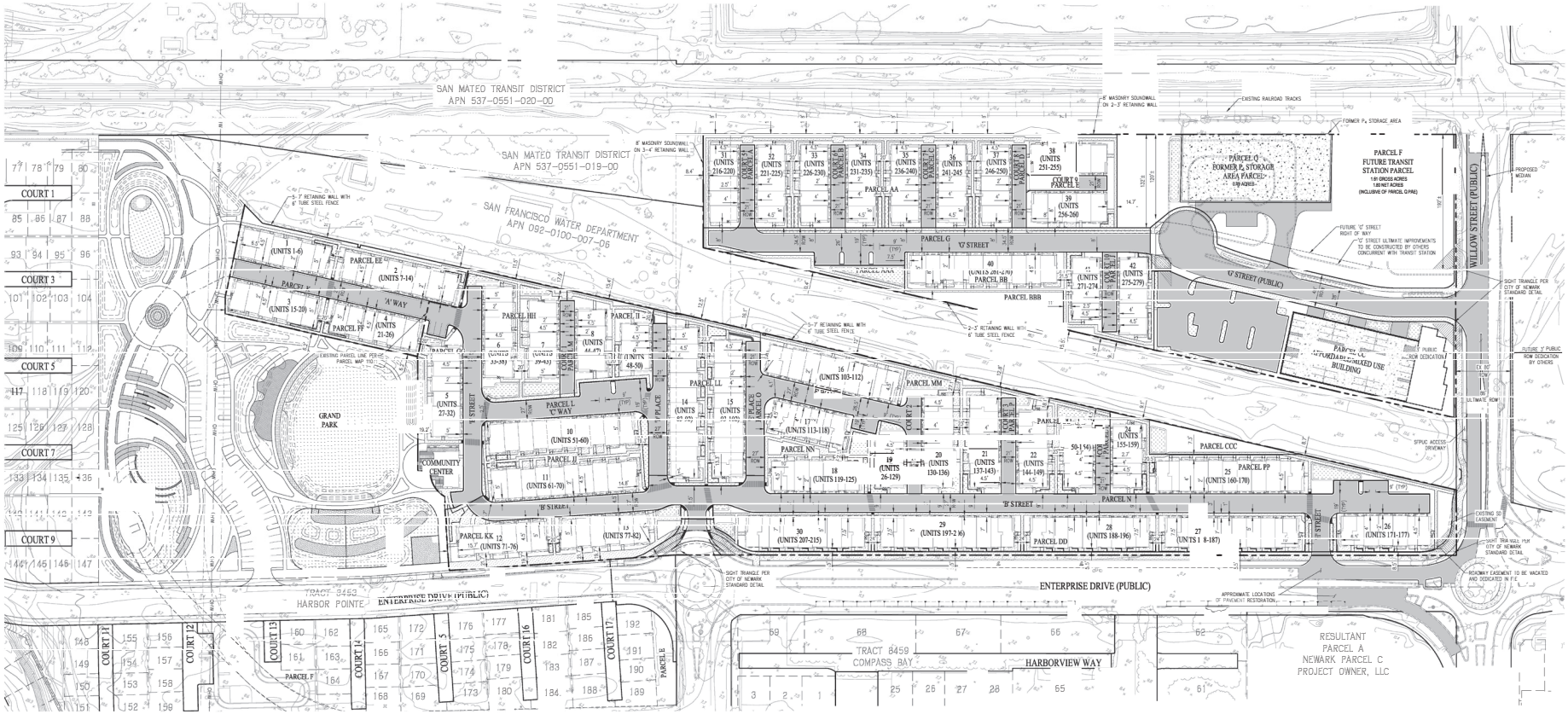
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Source: Base Map Layers (DigitalGlobe 2019); Data (Alameda County 2021)

HELIX Environmental Planning

Aerial Map

Figure 2



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Source: Urban Arena 2022

HELIX Environmental Planning

Site Plan

Figure 3



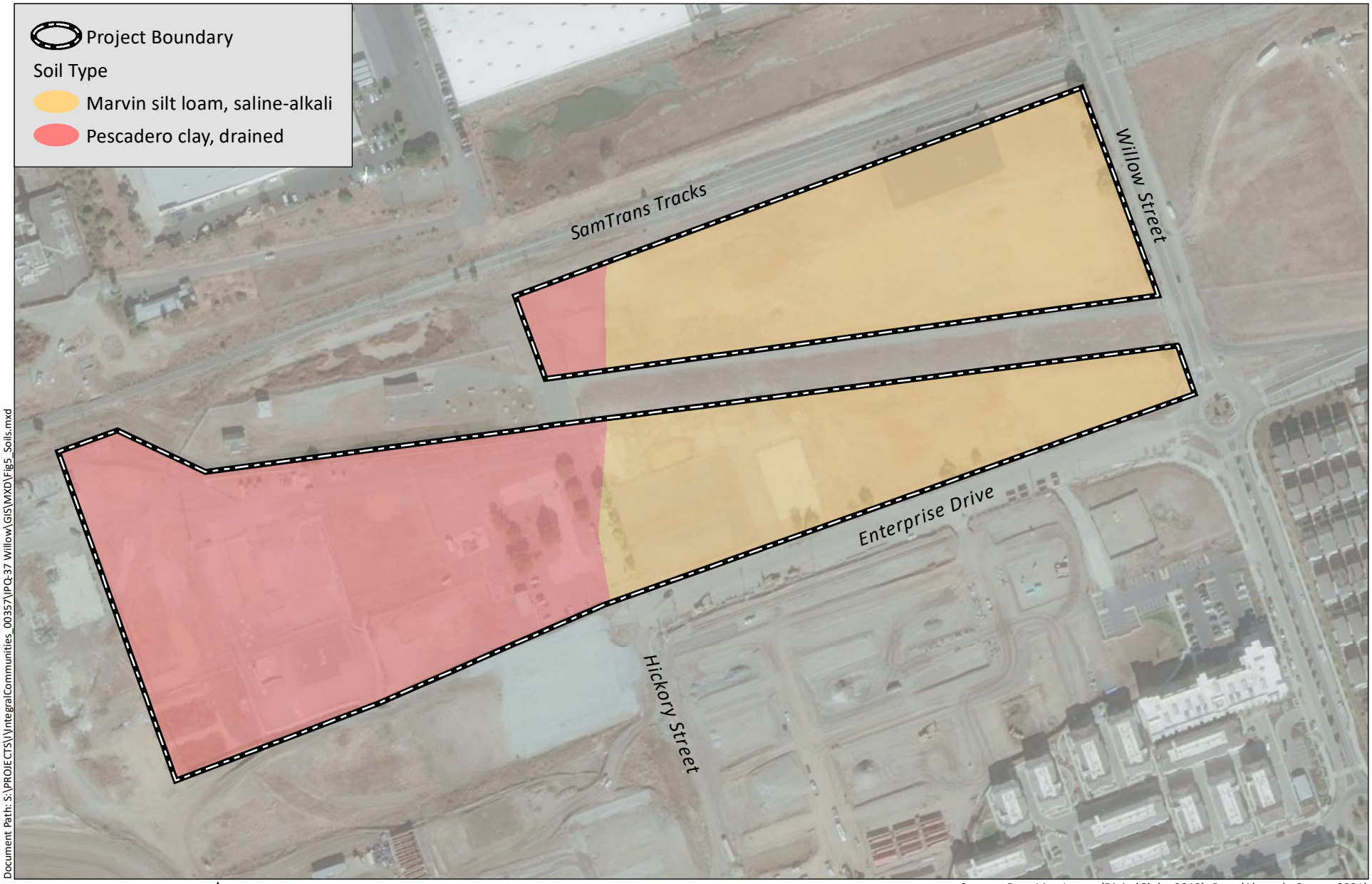
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Source: Urban Arena 2022

HELIX Environmental Planning

Site Design

Figure 4

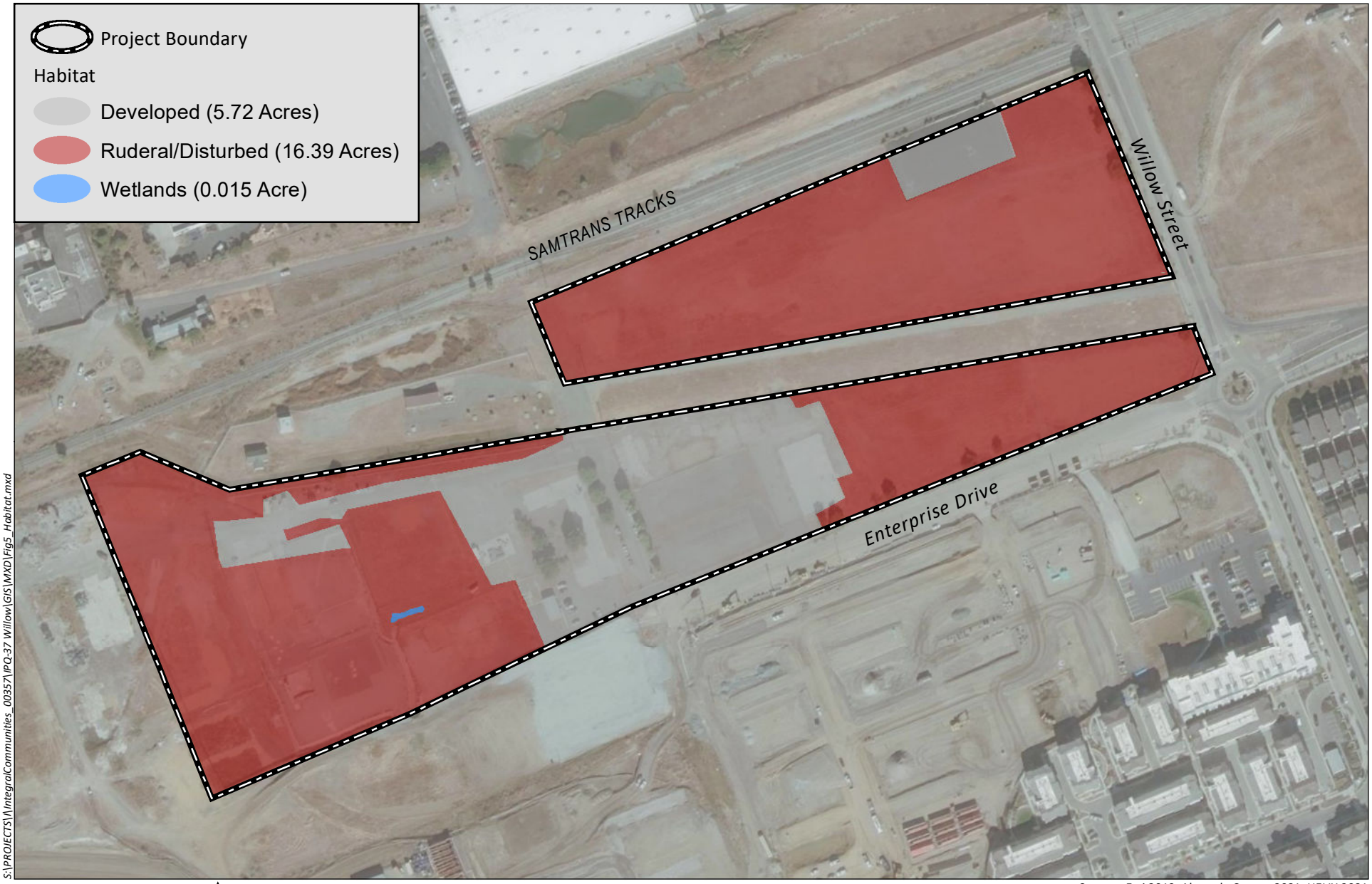


Source: Base Map Layers (DigitalGlobe 2019); Data (Alameda County 2021)

HELIX Environmental Planning

Soils Map

Figure 5



Source: Esri 2019, Alameda County 2021, HELIX 2021

HELIX Environmental Planning

Habitat Map

Figure 6

Appendix B

USFWS, CNDDB, and CNPS Lists of Regionally-occuring Special-status Species

IPaC **U.S. Fish & Wildlife Service**

IPaC resource list

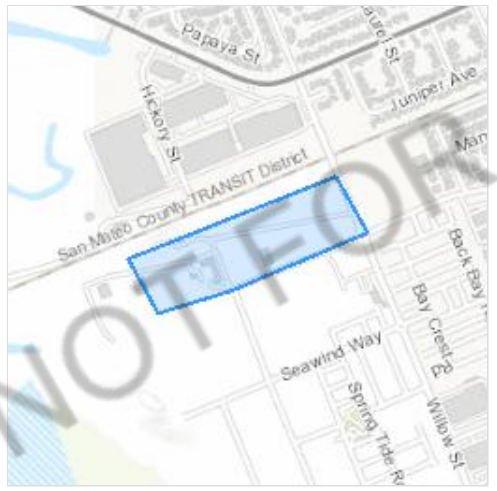
This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

NOT FOR CONSULTATION

Location

Alameda County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

NOT FOR CONSULTATION

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS

Salt Marsh Harvest Mouse Reithrodontomys raviventris — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/613

Birds

NAME	STATUS

California Clapper Rail Rallus longirostris obsoletus — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/4240

California Least Tern Sterna antillarum browni — Endangered
Wherever found
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/8104

Western Snowy Plover Charadrius nivosus nivosus — Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/8035

Reptiles

NAME	STATUS

Alameda Whipsnake (=striped Racer) Masticophis lateralis euryxanthus — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/5524

Amphibians

NAME	STATUS

California Red-legged Frog Rana draytonii — Threatened
Wherever found
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2891

California Tiger Salamander Ambystoma californiense — Threatened
There is **final** critical habitat for this species. The location of the critical habitat is not available.
https://ecos.fws.gov/ecp/species/2076

NOT FOR CONSULTATION

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
San Bruno Elfin Butterfly Callophrys mossii bayensis Wherever found There is **proposed** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/3394	Endangered

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp Branchinecta lynchi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp Lepidurus packardi Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
California Seablite Suaeda californica No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/6310	Endangered
Contra Costa Goldfields Lasthenia conjugens Wherever found There is **final** critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/7058	Endangered

NOT FOR CONSULTATION

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

NOT FOR CONSULTATION

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Allen's Hummingbird Selasphorus sasin — Breeds Feb 1 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9637

Bald Eagle Haliaeetus leucocephalus — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1626

Black Oystercatcher Haematopus bachmani — Breeds Apr 15 to Oct 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9591

Black Rail Laterallus jamaicensis — Breeds Mar 1 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/7717

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Black Turnstone Arenaria melanocephala — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

NOT FOR CONSULTATION

Burrowing Owl Athene cunicularia — Breeds Mar 15 to Aug 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9737

Clark's Grebe Aechmophorus clarkii — Breeds Jan 1 to Dec 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Common Yellowthroat Geothlypis trichas sinuosa — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/2084

Golden Eagle Aquila chrysaetos — Breeds Jan 1 to Aug 31
This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.
https://ecos.fws.gov/ecp/species/1680

Lewis's Woodpecker Melanerpes lewis — Breeds Apr 20 to Sep 30
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9408

Long-billed Curlew Numenius americanus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5511

Marbled Godwit Limosa fedoa — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9481

Nuttall's Woodpecker Picoides nuttallii — Breeds Apr 1 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/9410

Oak Titmouse Baeolophus inornatus — Breeds Mar 15 to Jul 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9656

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Rufous Hummingbird selasphorus rufus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8002

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Song Sparrow Melospiza melodia — Breeds Feb 20 to Sep 5
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Spotted Towhee Pipilo maculatus clementae — Breeds Apr 15 to Jul 20
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA
https://ecos.fws.gov/ecp/species/4243

Tricolored Blackbird Agelaius tricolor — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3910

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wrentit Chamaea fasciata — Breeds Mar 15 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie Pica nuttalli — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9726

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ

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"Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

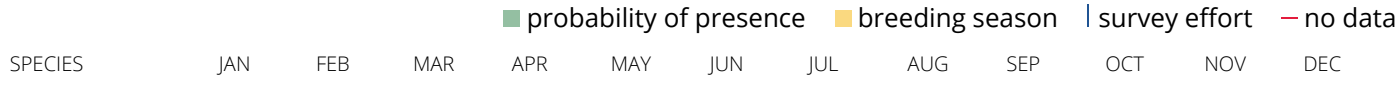
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

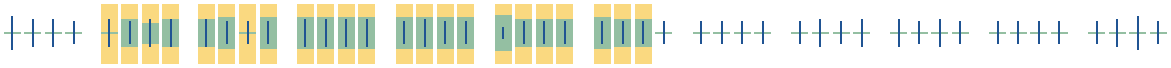
No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

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Allen's Hummingbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



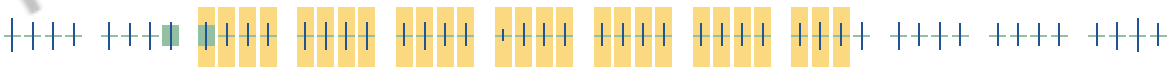
Bald Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Black Oystercatcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Black Rail BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Black Skimmer BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



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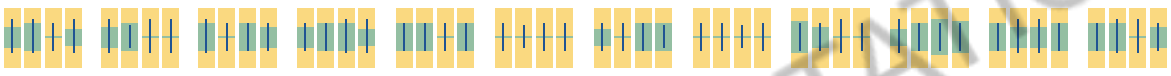
Black Turnstone BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Burrowing Owl BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



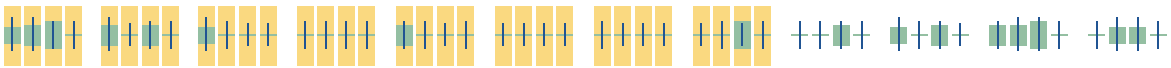
Clark's Grebe BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



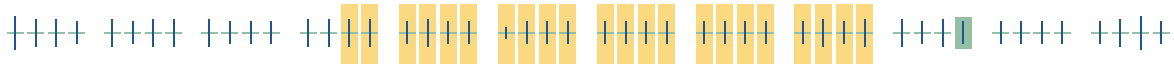
Common Yellowthroat BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Golden Eagle Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



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Lewis's Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

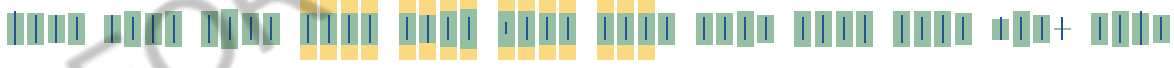


Long-billed Curlew BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

SPECIES JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC



Marbled Godwit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Nuttall's Woodpecker BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Oak Titmouse BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

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Rufous Hummingbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Short-billed Dowitcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



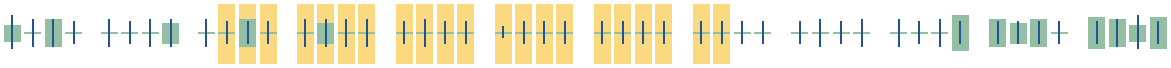
Song Sparrow BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Spotted Towhee BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)



Tricolored Blackbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



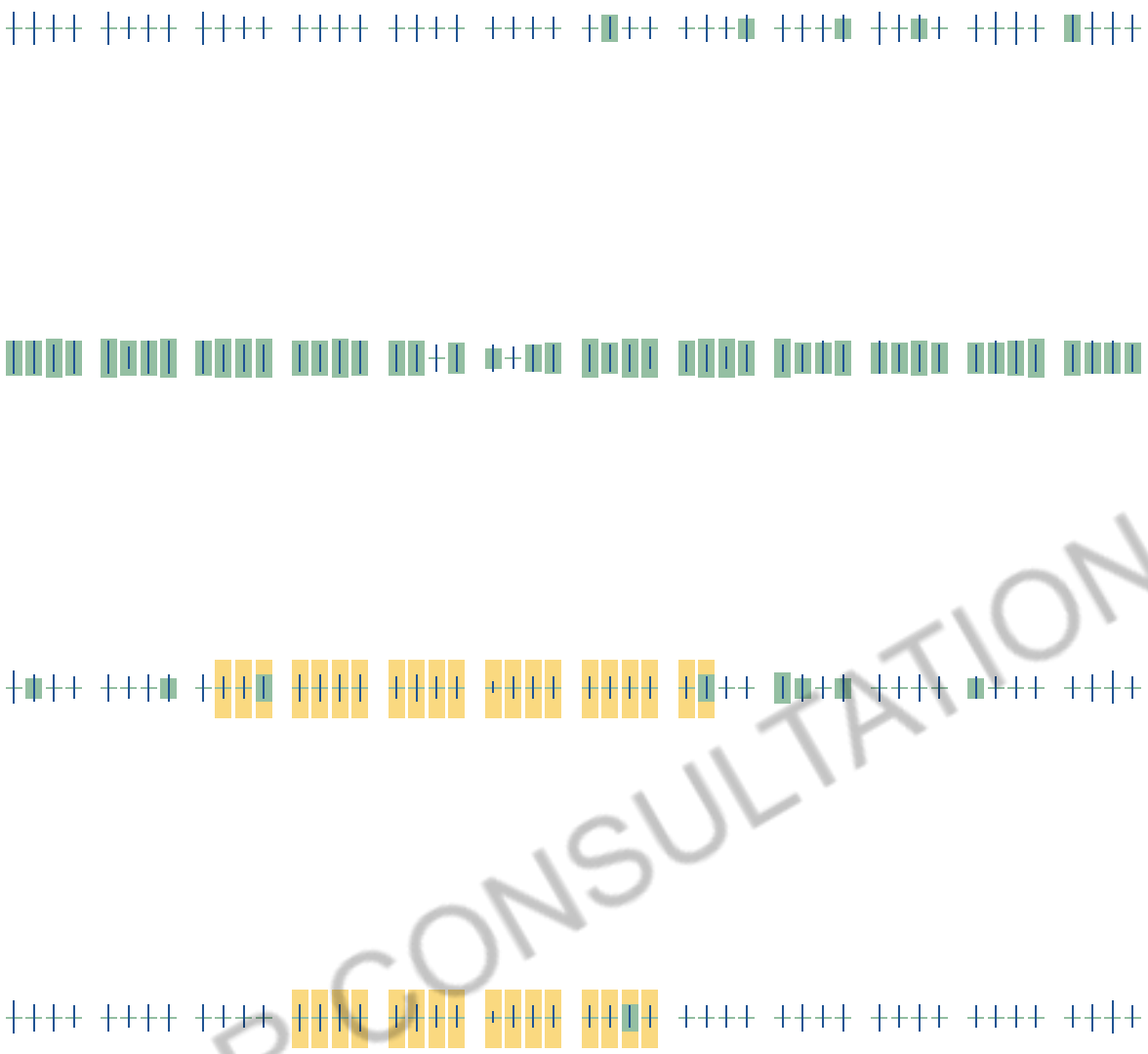
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Whimbrel BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Willet BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Wrentit BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Yellow-billed Magpie BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



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Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

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Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

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Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

PEM1Ch

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

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Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (San Leandro (3712262) OR Hayward (3712261) OR Dublin (3712168) OR Redwood Point (3712252) OR Newark (3712251) OR Niles (3712158) OR Palo Alto (3712242) OR Mountain View (3712241) OR Milpitas (3712148))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Acanthomintha duttonii San Mateo thorn-mint	PDLAM01040	Endangered	Endangered	G1	S1	1B.1
Accipiter cooperii Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
Accipiter striatus sharp-shinned hawk	ABNKC12020	None	None	G5	S4	WL
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
Allium peninsulare var. franciscanum Franciscan onion	PMLIL021R1	None	None	G5T2	S2	1B.2
Ambystoma californiense California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
Amsinckia lunaris bent-flowered fiddleneck	PDBOR01070	None	None	G3	S3	1B.2
Aneides niger Santa Cruz black salamander	AAAAD01070	None	None	G3	S3	SSC
Anniella pulchra Northern California legless lizard	ARACC01020	None	None	G3	S3	SSC
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Aquila chrysaetos golden eagle	ABNKC22010	None	None	G5	S3	FP
Ardea herodias great blue heron	ABNGA04010	None	None	G5	S4	
Asio flammeus short-eared owl	ABNSB13040	None	None	G5	S3	SSC
Astragalus tener var. tener alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atriplex depressa brittlescale	PDCHE042L0	None	None	G2	S2	1B.2
Atriplex minuscula lesser saltscale	PDCHE042M0	None	None	G2	S2	1B.1
Balsamorhiza macrolepis big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
Bombus caliginosus obscure bumble bee	IIHYM24380	None	None	G4?	S1S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
Bombus occidentalis western bumble bee	IIHYM24250	None	Candidate Endangered	G2G3	S1	
Campanula exigua chaparral harebell	PDCAM020A0	None	None	G2	S2	1B.2
Centromadia parryi ssp. congdonii Congdon's tarplant	PDAST4R0P1	None	None	G3T1T2	S1S2	1B.1
Charadrius nivosus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S2	SSC
Chloropyron maritimum ssp. palustre Point Reyes salty bird's-beak	PDSCR0J0C3	None	None	G4?T2	S2	1B.2
Chorizanthe robusta var. robusta robust spineflower	PDPGN040Q2	Endangered	None	G2T1	S1	1B.1
Circus hudsonius northern harrier	ABNKC11011	None	None	G5	S3	SSC
Cirsium fontinale var. fontinale fountain thistle	PDAST2E161	Endangered	Endangered	G2T1	S1	1B.1
Cirsium praeteriens lost thistle	PDAST2E2B0	None	None	GX	SX	1A
Clarkia concinna ssp. automixa Santa Clara red ribbons	PDONA050A1	None	None	G5?T3	S3	4.3
Coccyzus americanus occidentalis western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
Collinsia corymbosa round-headed Chinese-houses	PDSCR0H060	None	None	G1	S1	1B.2
Collinsia multicolor San Francisco collinsia	PDSCR0H0B0	None	None	G2	S2	1B.2
Corynorhinus townsendii Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
Coturnicops noveboracensis yellow rail	ABNME01010	None	None	G4	S1S2	SSC
Danaus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	Candidate	None	G4T2T3	S2S3	
Dicamptodon ensatus California giant salamander	AAAAH01020	None	None	G3	S2S3	SSC
Dipodomys venustus venustus Santa Cruz kangaroo rat	AMAFD03042	None	None	G4T1	S1	
Dirca occidentalis western leatherwood	PDTHY03010	None	None	G2	S2	1B.2
Egretta thula snowy egret	ABNGA06030	None	None	G5	S4	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Elanus leucurus white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eremophila alpestris actia California horned lark	ABPAT02011	None	None	G5T4Q	S4	WL
Eryngium aristulatum var. hooveri Hoover's button-celery	PDAPI0Z043	None	None	G5T1	S1	1B.1
Eryngium jepsonii Jepson's coyote-thistle	PDAPI0Z130	None	None	G2	S2	1B.2
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G4G5T4	S3S4	SSC
Euphydryas editha bayensis Bay checkerspot butterfly	IILEPK4055	Threatened	None	G5T1	S1	
Extriplex joaquinana San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
Fritillaria liliacea fragrant fritillary	PMLIL0V0C0	None	None	G2	S2	1B.2
Geothlypis trichas sinuosa saltmarsh common yellowthroat	ABPBX1201A	None	None	G5T3	S3	SSC
Gilia millefoliata dark-eyed gilia	PDPLM04130	None	None	G2	S2	1B.2
Gonidea angulata western ridged mussel	IMBIV19010	None	None	G3	S1S2	
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Helianthella castanea Diablo helianthella	PDAST4M020	None	None	G2	S2	1B.2
Hesperolinon congestum Marin western flax	PDLIN01060	Threatened	Threatened	G1	S1	1B.1
Hoita strobilina Loma Prieta hoita	PDFAB5Z030	None	None	G2?	S2?	1B.1
Holocarpha macradenia Santa Cruz tarplant	PDAST4X020	Threatened	Endangered	G1	S1	1B.1
Horkelia cuneata var. sericea Kellogg's horkelia	PDROS0W043	None	None	G4T1?	S1?	1B.1
Lasiurus cinereus hoary bat	AMACC05030	None	None	G3G4	S4	
Lasthenia conjugens Contra Costa goldfields	PDAST5L040	Endangered	None	G1	S1	1B.1
Laterallus jamaicensis coturniculus California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Malacothamnus arcuatus arcuate bush-mallow	PDMAL0Q0E0	None	None	G2Q	S2	1B.2
Masticophis lateralis euryxanthus Alameda whipsnake	ARADB21031	Threatened	Threatened	G4T2	S2	
Melospiza melodia pusillula Alameda song sparrow	ABPBXA301S	None	None	G5T2?	S2S3	SSC
Microcina lumi Lum's micro-blind harvestman	ILARA47050	None	None	G1	S1	
Monolopia gracilens woodland woollythreads	PDAST6G010	None	None	G3	S3	1B.2
Myotis yumanensis Yuma myotis	AMACC01020	None	None	G5	S4	
Navarretia prostrata prostrate vernal pool navarretia	PDPLM0C0Q0	None	None	G2	S2	1B.2
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	AMAFF08082	None	None	G5T2T3	S2S3	SSC
Northern Coastal Salt Marsh Northern Coastal Salt Marsh	CTT52110CA	None	None	G3	S3.2	
Nycticorax nycticorax black-crowned night heron	ABNGA11010	None	None	G5	S4	
Oncorhynchus mykiss irideus pop. 8 steelhead - central California coast DPS	AFCHA0209G	Threatened	None	G5T2T3Q	S2S3	
Phalacrocorax auritus double-crested cormorant	ABNFD01020	None	None	G5	S4	WL
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	PDBOR0V061	None	None	G3T1Q	S1	1B.2
Plagiobothrys glaber hairless popcornflower	PDBOR0V0B0	None	None	GX	SX	1A
Polemonium carneum Oregon polemonium	PDPLM0E050	None	None	G3G4	S2	2B.2
Polygonum marinense Marin knotweed	PDPGN0L1C0	None	None	G2Q	S2	3.1
Puccinellia simplex California alkali grass	PMPOA53110	None	None	G3	S2	1B.2
Rallus obsoletus obsoletus California Ridgway's rail	ABNME05011	Endangered	Endangered	G3T1	S1	FP
Rana boylii foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Reithrodontomys raviventris salt-marsh harvest mouse	AMAFF02040	Endangered	Endangered	G1G2	S1S2	FP
Riparia riparia bank swallow	ABPAU08010	None	Threatened	G5	S2	
Rynchops niger black skimmer	ABNNM14010	None	None	G5	S2	SSC
Sanicula maritima adobe sanicle	PDAPI1Z0D0	None	Rare	G2	S2	1B.1
Scapanus latimanus parvus Alameda Island mole	AMABB02031	None	None	G5T1Q	SH	SSC
Senecio aphanactis chaparral ragwort	PDAST8H060	None	None	G3	S2	2B.2
Serpentine Bunchgrass Serpentine Bunchgrass	CTT42130CA	None	None	G2	S2.2	
Setophaga petechia yellow warbler	ABPBX03010	None	None	G5	S3S4	SSC
Sorex vagrans halicoetes salt-marsh wandering shrew	AMABA01071	None	None	G5T1	S1	SSC
Spergularia macrotheca var. longistyla long-styled sand-spurrey	PDCAR0W062	None	None	G5T2	S2	1B.2
Spirinchus thaleichthys longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	
Sternula antillarum browni California least tern	ABNNM08103	Endangered	Endangered	G4T2T3Q	S2	FP
Streptanthus albidus ssp. peramoenus most beautiful jewelflower	PDBRA2G012	None	None	G2T2	S2	1B.2
Stuckenia filiformis ssp. alpina slender-leaved pondweed	PMPOT03091	None	None	G5T5	S2S3	2B.2
Suaeda californica California seablite	PDCHE0P020	Endangered	None	G1	S1	1B.1
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis sirtalis tetrataenia San Francisco gartersnake	ARADB3613B	Endangered	Endangered	G5T2Q	S2	FP
Trifolium amoenum two-fork clover	PDFAB40040	Endangered	None	G1	S1	1B.1
Trifolium hydrophilum saline clover	PDFAB400R5	None	None	G2	S2	1B.2
Tryonia imitator mimic tryonia (=California brackishwater snail)	IMGASJ7040	None	None	G2	S2	

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Valley Needlegrass Grassland	CTT42110CA	None	None	G3	S3.1	
Valley Needlegrass Grassland						
Valley Oak Woodland	CTT71130CA	None	None	G3	S2.1	
Valley Oak Woodland						
Vulpes macrotis mutica	AMAJA03041	Endangered	Threatened	G4T2	S2	
San Joaquin kit fox						

Record Count: 106

CNPS California Native Plant Society

*The database used to provide updates to the Online Inventory is under construction. View updates and changes made since May 2019 here.

Plant List

46 matches found. *Click on scientific name for details*

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B, 3],
FESA is one of [Endangered, Threatened, Candidate, Not Listed],
CESA is one of [Endangered, Threatened, Rare, Not Listed], Found in Quads 3712262, 3712261, 3712168, 3712252, 3712251, 3712158, 3712242 3712241 and 3712148;

Modify Search Criteria Export to Excel Modify Columns Modify Sort Display Photos

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Acanthomintha duttonii	San Mateo thorn-mint	Lamiaceae	annual herb	Apr-Jun	1B.1	S1	G1
Allium peninsulare var. franciscanum	Franciscan onion	Alliaceae	perennial bulbiferous herb	(Apr)May-Jun	1B.2	S2	G5T2
Amsinckia lunaris	bent-flowered fiddleneck	Boraginaceae	annual herb	Mar-Jun	1B.2	S3	G3
Arctostaphylos regismontana	Kings Mountain manzanita	Ericaceae	perennial evergreen shrub	Dec-Apr	1B.2	S2	G2
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	1B.2	S1	G2T1
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	1B.1	S2	G2
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Campanula exigua	chaparral harebell	Campanulaceae	annual herb	May-Jun	1B.2	S2	G2
Centromadia parryi ssp. congdonii	Congdon's tarplant	Asteraceae	annual herb	May-Oct(Nov)	1B.1	S1S2	G3T1T2
Chloropyron maritimum ssp. palustre	Point Reyes bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Oct	1B.2	S2	G4?T2
Cirsium fontinale var. fontinale	Crystal Springs fountain thistle	Asteraceae	perennial herb	(Apr)May-Oct	1B.1	S1	G2T1
Cirsium praeteriens	lost thistle	Asteraceae	perennial herb	Jun-Jul	1A	SX	GX
Collinsia corymbosa	round-headed Chinese-houses	Plantaginaceae	annual herb	Apr-Jun	1B.2	S1	G1
Collinsia multicolor	San Francisco collinsia	Plantaginaceae	annual herb	(Feb)Mar-May	1B.2	S2	G2

Dirca occidentalis	western leatherwood	Thymelaeaceae	perennial deciduous shrub	Jan-Mar(Apr)	1B.2	S2	G2
Eryngium aristulatum var. hooveri	Hoover's button-celery	Apiaceae	annual / perennial herb	(Jun)Jul(Aug)	1B.1	S1	G5T1
Eryngium jepsonii	Jepson's coyote thistle	Apiaceae	perennial herb	Apr-Aug	1B.2	S2?	G2?
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Fritillaria liliacea	fragrant fritillary	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2	G2
Helianthella castanea	Diablo helianthella	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Hesperolinon congestum	Marin western flax	Linaceae	annual herb	Apr-Jul	1B.1	S1	G1
Holocarpha macradenia	Santa Cruz tarplant	Asteraceae	annual herb	Jun-Oct	1B.1	S1	G1
Lasthenia conjugens	Contra Costa goldfields	Asteraceae	annual herb	Mar-Jun	1B.1	S1	G1
Lessingia hololeuca	woolly-headed lessingia	Asteraceae	annual herb	Jun-Oct	3	S2S3	G3?
Malacothamnus arcuatus	arcuate bush-mallow	Malvaceae	perennial evergreen shrub	Apr-Sep	1B.2	S2	G2Q
Malacothamnus davidsonii	Davidson's bush-mallow	Malvaceae	perennial deciduous shrub	Jun-Jan	1B.2	S2	G2
Malacothamnus hallii	Hall's bush-mallow	Malvaceae	perennial evergreen shrub	(Apr)May-Sep(Oct)	1B.2	S2	G2
Micropus amphibolus	Mt. Diablo cottonweed	Asteraceae	annual herb	Mar-May	3.2	S3S4	G3G4
Monardella antonina ssp. antonina	San Antonio Hills monardella	Lamiaceae	perennial rhizomatous herb	Jun-Aug	3	S1S3	G4T1T3Q
Monolopia gracilens	woodland woolythreads	Asteraceae	annual herb	(Feb)Mar-Jul	1B.2	S3	G3
Navarretia myersii ssp. myersii	pincushion navarretia	Polemoniaceae	annual herb	Apr-May	1B.1	S2	G2T2
Navarretia paradoxiclara	Patterson's navarretia	Polemoniaceae	annual herb	May-Jun(Jul)	1B.3	S2	G2
Navarretia prostrata	prostrate vernal pool navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G2
Plagiobothrys chorisianus var. chorisianus	Choris' popcornflower	Boraginaceae	annual herb	Mar-Jun	1B.2	S1	G3T1Q
Plagiobothrys glaber	hairless popcornflower	Boraginaceae	annual herb	Mar-May	1A	SH	GH
Polemonium carneum	Oregon polemonium	Polemoniaceae	perennial herb	Apr-Sep	2B.2	S2	G3G4
Puccinellia simplex	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3
Senecio aphanactis	chaparral ragwort	Asteraceae	annual herb	Jan-Apr(May)	2B.2	S2	G3
Spergularia macrotheca var. longistyla	long-styled sand-spurrey	Caryophyllaceae	perennial herb	Feb-May(Jun)	1B.2	S2	G5T2
Streptanthus albidus ssp. peramoenus	most beautiful jewelflower	Brassicaceae	annual herb	(Mar)Apr-Sep(Oct)	1B.2	S2	G2T2
Stuckenia filiformis ssp. alpina	slender-leaved pondweed	Potamogetonaceae	perennial rhizomatous herb	May-Jul	2B.2	S2S3	G5T5

			(aquatic)				
Suaeda californica	California seablite	Chenopodiaceae	perennial evergreen shrub	Jul-Oct	1B.1	S1	G1
Trifolium amoenum	two-fork clover	Fabaceae	annual herb	Apr-Jun	1B.1	S1	G1
Trifolium hydrophilum	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2
Tropidocarpum capparideum	caper-fruited tropidocarpum	Brassicaceae	annual herb	Mar-Apr	1B.1	S1	G1

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Appendix C

Potential for Special-Status Species to Occur in the Project Site

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Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
Invertebrates				
Bombus crotchii crotch bumblebee	--/SCE/--/--	Crotch bumble bee occurs in grassland and scrub habitats (CDFW 2019). New colonies are initiated by solitary queens, generally in the early spring, which typically occupy abandoned rodent burrows (CDFW 2019). This species is a generalist forager and have been reported visiting a wide variety of flowering plants. A short-tongued bumble bee; food plants include *Asclepias* spp., *Antirrhinum* spp., *Clarkia* spp., *Eschscholzia* spp., *Eriogonum* spp., *Chaenactis* spp., *Lupinus* spp., *Medicago* spp., *Phacelia* spp., and *Salvia* spp. (Koch et al. 2012). The flight period for queens in California is from February to October. New queens hibernate over the winter and initiate a new colony the following spring (CDFW 2019). Rare throughout its range and in decline in the Central Valley and southern California (CDFW 2019).	Will not occur	Some select food plants are present on site for western bumble bee, however vegetation onsite is routinely managed and potential food plants are unlikely to persist. The nearest recorded occurrence for this species is 9 mile west of the project site and is from 1909. The area has since been developed and it is unlikely that this population is still extant (CNDDB 2021)
Bombus occidentalis Western bumble bee	--/SCE/--	Bumble bees are primitively eusocial insects that live in underground colonies made up of one queen, female workers, and reproductive members of the colony. New colonies are initiated by solitary queens, generally in the early spring, and typically occupy abandoned rodent burrows (Thorp et al. 1983). Western bumble bee is a generalist forager and has been reported visiting a wide variety of flowering plants; select food plants include *Melilotus* spp., *Cirsium* spp., *Trifolium* spp., *Centaurea* spp., *Eriogonum* spp., and *Chrysothamnus* spp. (Koch et al. 2012). This species has a short tongue and typically prefers open flowers with short corollas but is known to chew through the base of flowers with long corollas. The flight period for queens in California	Will not occur	Some select food plants are present on site for western bumble bee, however vegetation onsite is routinely managed and potential food plants are unlikely to persist. This species is currently rare across its range and is in decline in California and is limited to high elevation meadows in the Sierra Nevada and small coastal populations (CDFW 2019). There is a historical occurrence in the CNDDB dated 1971 that includes the project site; however, this occurrence is nonspecific with no

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		is from early February to late November, peaking in late June and late September. Rare throughout its range and in decline west of the Sierra Nevada crest.		exact location (CDFW 2021). There are no recent CNDDB records of this species and no published information as to where known populations currently persist in California along the coast. Additionally, there are no observations in the iNaturalist database for this species near the project site (iNaturalist 2020).
Danaus plexippus pop. 1 monarch - California overwintering population	FCE/--/--	Roosts in wind protected tree groves, especially with *Eucalyptus* sp., *Pinus radiata*, *Cupressus* sp., with nectar and water sources nearby. Winter roost sites extend along the coast from Mendocino County to Baja California (Nail et al. 2019)	Will not occur	There are no suitable wind protected tree groves on the project site; trees on the site are too scattered to provide wind protection.
Euphydryas editha bayensis Bay checkerspot butterfly	FT/--/--	Inhabits shallow, serpentine-derived soil with current populations in San Francisco, San Mateo and Santa Clara counties. Larvae require dwarf plantain (*Plantago erecta*) initially, and then transfer to exerted Indian paintbrush (*Castilleja exserta*) or purple owl's clover (*Castilleja exserta* spp. *exerta*). Adults emerge in early spring lay eggs during flight season from late February to early May (Black and Vaughan 2005).	Will not occur	The project is outside of this species current range and there is no suitable serpentine soil in the project site. While dwarf plantain is present on the project, there is no Indian paintbrush or purple owl's clover on the site.
Lepidurus packardi vernal pool tadpole shrimp	FE/--/--	Vernal pools from 54 square feet to 89 acres, containing clear- to highly-turbid water. Its known range is within the Central Valley of California and in the San Francisco Bay area (USFWS 2005a).	Will not occur	There is no suitable vernal pool habitat in the project site.
Fishes				
Hypomesus transpacificus Delta smelt	FT/--/--	Delta smelt spawn in shallow, fresh or slightly brackish water upstream of the mixing zone. Most spawning happens in tidally-influenced	Will not occur	There is no suitable aquatic habitat in the project site.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		backwater sloughs and channel edgewaters. Although spawning has not been observed in the wild, the eggs are thought to attach to substrates such as cattails, tules, tree roots and submerged branches. Delta smelt are found only from the Suisun Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano and Yolo counties (USFWS 1995).		
Oncorhynchus mykiss irideus central California coast Steelhead DPS	FT/--/--	Steelhead spawn in rivers and streams with cool, clear, water and suitable substrate. This distinct population segment includes all naturally spawned anadromous *O. mykiss* (steelhead) populations below natural and manmade impassable barriers from the Russian River to Aptos Creek, Santa Cruz County and their tributaries, including drainages from the San Francisco and San Pablo Bays and their tributaries (NOAA 2006).	Will not occur	There is no suitable aquatic habitat in the project site.
Spirinchus thaleichthys Longfin smelt	FC/ST/--	The longfin smelt is a pelagic estuarine fish that spawns in freshwater and then moves downstream to brackish water to rear. They usually live for 2 years, spawn, and then die, although some individuals may spawn as 1- or 3-year-old fish before dying. Longfin smelt in the Bay-Delta may spawn as early as November and as late as June, although spawning typically occurs from January to April. The known range of the longfin smelt extends from the San Francisco Bay-Delta in California northward to the Cook Inlet in Alaska. Longfin smelt have been observed as far upstream as Isleton in the Sacramento River, Santa Clara shoal in the San Joaquin system, Hog Slough off the South-Fork Mokelumne River, and in Old River south of Indian Slough (USFWS 2016).	Will not occur	There is no suitable aquatic habitat in the project site.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
Amphibians				
Ambystoma californiense California tiger salamander	FT/--/SSC	California tiger salamanders are generally restricted to vernal pools and seasonal ponds, including many constructed stock ponds, in grassland and oak savannah plant communities from sea level to about 1,500 feet in central California. This species spends the majority of its life in upland areas in the vicinity of suitable breeding ponds, where it inhabits rodent burrows. In order to provide suitable habitat for this species, suitable breeding habitat must be present in combination with suitable upland habitat. In the Coastal region, populations are scattered from Sonoma County in the northern San Francisco Bay Area to Santa Barbara County, and in the Central Valley and Sierra Nevada foothills from Yolo to Kern counties (USFWS 2017a).	Will not occur	There is no suitable freshwater breeding habitat in or near the project site. The site is developed and surrounded by developed areas.
Aneides niger Santa Cruz black salamander	--/--/SSC	Occurs in deciduous woodlands, coniferous forests, grasslands. Typically found under surface debris such as logs, talus and other debris. Young develop in the egg directly to the terrestrial stage. Endemic to California in the San Francisco Peninsula to southern San Mateo county (Lannoo 2005).	Will not occur	There is no suitable woodland or grassland habitat in or near the project site. The site is developed and surrounded by developed areas.
Dicamptodon ensatus California giant salamander	--/--/SSC	Endemic to California and occurs in wet coastal forests near clear, cold perennial streams below 3,000 feet above msl. Larval stage transforms to adult stage after approximately 18-24 months. Typically found on the surface on rainy nights or wet days while foraging. Will eat anything that it can overpower and fit into its mouth, such as slugs, rodents, other amphibians and reptiles (Kucera 1997).	Will not occur	There is no suitable freshwater stream breeding habitat in or near the project site. The site is developed and surrounded by developed areas.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
Rana boylii foothill yellow-legged frog	--/SE/SSC	The foothill yellow-legged frog occurs along the coast ranges from Oregon to Los Angeles and along the western side of the Sierra Nevada. This species uses perennial rocky streams in a wide variety of habitats up to 6,400 feet above msl. This species rarely ventures far from water, is usually found basking in the water, or under surface debris or underground within 165 feet of water. Eggs are laid in clusters attached to gravel or rocks along stream margins in flowing water. Tadpoles typically require up to four months to complete aquatic development. Breeding typically follows winter rainfall and snowmelt, which varies based upon location (Jennings and Hayes 1994).	Will not occur	There is no suitable freshwater stream breeding habitat in or near the project site. The site is developed and surrounded by developed areas.
Rana draytonii California red-legged frog	FT/--/SSC	The California red-legged frog occupies a distinct habitat, combining both specific aquatic and riparian components. The adults require dense, shrubby or emergent riparian vegetation closely associated with deep (greater than 2 1/3-foot deep) still or slow-moving water. The largest densities of California red-legged frogs are associated with deep-water pools with dense stands of overhanging willows (*Salix* spp.) and an intermixed fringe of cattails (*Typha latifolia*). Well-vegetated terrestrial areas within the riparian corridor may provide important sheltering habitat during winter. California red-legged frogs aestivate (enter a dormant state during summer or dry weather) in small mammal burrows and moist leaf litter. They have been found up to 100 feet from water in adjacent dense riparian vegetation. Studies have indicated that this species cannot inhabit water bodies that exceed 70° F, especially if there are no cool, deep	Will not occur	There is no suitable freshwater breeding habitat in or near the project site. The site is developed and surrounded by developed areas.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		portions (USFWS 2002).		
Reptiles				
Anniella pulchra Northern California legless lizard	--/--/SSC	A fossorial species that occupies loose soil in stabilized dunes, coastal scrub, chaparral and oak woodlands. Found in loose friable (usually sandy) soils under leaf litter or other debris where vegetation is sparse along beaches, chaparral, pine-oak woodland, stream terraces and riparian. Highly dependent on soil moisture (Jennings and Hayes 1994).	Will not occur	There is no suitable soils or habitat in or near the project site.
Coluber (=Masticophis) lateralis euryxanthus Alameda whipsnake	FT/ST/--	Inhabits chaparral and scrub communities and utilizes adjacent grasslands, oak savannah, and oak-bay woodlands. Fast and active foraging snake with keen vision that pursues lizards, but also eats frogs, snakes and birds by day (USFWS 2005). Favors sunny slopes with rock outcrops. Currently known from 5 isolated populations in Contra Costa, Alameda, San Joaquin and Santa Clara counties (USFWS 2005b).	Will not occur	There is no suitable chaparral or other scrub habitat in or near the project site.
Emys marmorata western pond turtle	--/--/SSC	Turtle that inhabits slow-moving water with dense submerged vegetation, abundant basking sites, gently sloping banks, and dry clay or silt soils in nearby uplands. Turtles will lay eggs up to 0.25-mile from water, but typically go no more than 600 feet (Jennings and Hayes 1994).	Will not occur	There is no suitable aquatic habitat in or near the project site.
Thamnophis sirtalis tetrataenia San Francisco gartersnake	FE/SE/FP	Endemic to the San Joaquin and Sacramento Valley floors. Inhabits agricultural wetlands and other waterways such as irrigation and drainage canals, sloughs, ponds, small lakes, low gradient streams, and adjacent uplands. Requires adequate water during its active season (early spring through mid-fall) to provide food and cover, emergent, herbaceous wetland vegetation for foraging and cover, grassy banks and openings in waterside vegetation for basking,	Will not occur	There is no suitable aquatic habitat in or near the project site.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		and higher elevation uplands for cover and refuge from flood waters during its dormant season (winter). Inhabits small mammal burrows and other soil crevices with sunny exposure along south and west facing slopes, above prevailing flood elevations when dormant. Primarily found in marshes and sloughs as well as slow-moving creeks but absent from large rivers (USFWS 2017b).		
Birds				
Accipiter cooperii Cooper's hawk	--/--/WL	Nests in woodlands and urban trees. Preys on medium-sized birds and small mammals. Forages in open woodland and habitat edges. Dense stands of live oak, riparian deciduous, or other forest habitats near water used most frequently (Zeiner et al. 1988-1990).	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to the project site.
Accipiter striatus sharp-shinned hawk	--/--/WL	Primarily found in dense woodland habitat on north facing slopes. Prefers riparian areas, nesting sites are generally within 275 feet of water. Forges in edges along forested habitat and brushy pastures (Zeiner et al. 1988-1990).	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to the project site.
Agelaius tricolor tricolored blackbird	FC/ST/SSC	Common locally throughout central California. Nests and seeks cover in emergent wetland vegetation, specifically cattails and tules, but may also use riparian vegetation. Nesting area must be large enough to support a minimum colony of 50 pairs as they are a highly colonial species. Forages on ground in croplands, grassy fields, flooded land, and edges of ponds (Shuford and Gardali 2008).	Will not occur	There is brackish marsh with emergent wetland vegetation adjacent to the site, however the marshes are likely too small to provide breeding habitat to support a nesting colony and the proximity of the marsh habitat to ongoing disturbance on the site renders the marsh unlikely to be used by this species. In addition, tri-colored blackbird has not been observed in or near the site during multiple biological surveys conducted by HELIX on the

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
				project site and on adjacent parcels with more suitable habitat.
Aquila chrysaetos Golden eagle	--/--/FP	Typically occurs in rolling foothills, mountain areas, deserts and other open habitats up to 3,822 m amsl. Typically nests on cliff ledges or large trees in open areas in canyons. Will occasionally use other tall structures for nesting, such as electrical transmission towers. Prey consists mostly of rodents, carrion, birds, reptiles and occasionally small livestock (Zeiner et al. 1990).	Will not occur (nesting)	Golden eagle was observed flying over the site during a biological survey on February 20, 2020. However, there is no suitable nesting habitat on or adjacent to the site for this species and it is unlikely that golden eagle would use the site for foraging due to its small size and high level of disturbance. Abundant foraging habitat for golden eagle is present in open lands to the west and northwest of the site.
Asio flammeus short-eared owl	--/--/SSC	Nests on the ground in tall herbaceous vegetation in grassland and open habitat. Feeds almost exclusively on voles (*Microtus* spp.). Range and abundance are linked closely to cycles in vole populations (Shuford and Gardali 2008). Will also use manmade structures for nesting or refuge, such as culverts.	Will not occur	There is no suitable grassland nesting or foraging habitat in or adjacent to the project site. The nearest documented occurrence was recorded 9.15 miles west of the site on Bair Island in 1977 (CNDDB 2021).
Athene cunicularia **burrowing owl**	**--/--/SSC**	**Inhabits open habitats including arid grasslands, pastures, disturbed areas, and deserts. Occupies burrows of small mammals, especially California ground squirrel (*Otospermophilus beecheyi*), or artificial burrows such as pipes and culverts. Hunts from low perches, fence posts, and mounds. Breeds from Marsh through August (CDFW 2012).**	**May occur**	**Marginal nesting habitat is present in and adjacent to the project site consisting of ground squirrel burrows in ruderal habitat dominated by annual grasses and forbs. This species was documented in the CNDDB along the Hetch Hetchy Aqueduct adjacent to the site in 2012 (CDFW 2019). Although site disturbances associated with remediation activities likely**

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
				preclude this species from using the site, there is a potential it could occupy ground squirrel burrows on and adjacent to the site.
Charadrius nivosus nivosus western snowy plover	FT/--/SSC	Federal listing applies only to coastal populations that nest on sand beaches above the high tide line. Interior populations nest on barren to sparsely vegetated flats along the shores of lakes, braided river systems, salt ponds, and agricultural sumps. Adults feed on insects and brine shrimp (Shuford and Garaldi 2008).	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to the project site.
Circus hudsonius northern harrier	--/--/SSC	Inhabits a variety of treeless habitats including freshwater marsh, brackish- and saltwater marsh, wet meadows, lake margins, grasslands, croplands, desert sinks, and sagebrush flats. Builds nests on large mounds of vegetation between March and August. Forages in most open habitats (Shuford and Gardali 2008).	Will not occur	There is no suitable nesting habitat in the project site and very limited foraging habitat since the site's vegetation is maintained. This species was not observed onsite during any of the biological surveys.
Coccyzus americanus occidentalis western yellow-billed cuckoo	FT/SE/--	Occurs at isolated sites in Sacramento Valley in northern California, and along Kern and Colorado River systems in southern California. Frequents valley foothill and desert riparian habitats. Inhabits open woodlands with clearings, and riparian habitats with dense understory foliage along slow-moving drainages, backwaters, or seeps. Prefers dense willows for roosting but will use adjacent orchard in the Sacramento Valley. Typically requires expansive riparian habitat for nesting (Zeiner et al. 1990).	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to the project site.
Coturnicops noveboracensis Yellow rail	--/--/SSC	An uncommon winter migrant in California uses marsh and deep grass habitat. Forages and breeds in shallow marshes, wet meadows. Winters in drier fresh and brackish marshes. Will also use hayfield and rice fields or other deep	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to the project site.

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		grass habitat during the winter.		
Elanus leucurus **white-tailed kite**	**--/--/FP**	**Forages over open grasslands, savannahs, marshes, and cultivated fields. Nests in trees in a variety of locations including isolated trees, and edges and interior of stands (Zeiner et al. 1990).**	**Present (foraging)**	**A pair was observed foraging over the project site and defending their territory from a red-tailed hawk during the biological survey on April 4, 2019 and again on February 28, 2020. Although there are potentially suitable nest trees, this species would not be expected to nest in the project site with the high levels of ongoing disturbance associated with the remediation activities. However, the pair of white-tailed kites may use nest trees in proximity to the site.**
Eremophila alpestris actia California horned lark	--/--/WL	Occurs along the coast from Sonoma to San Diego County. Found in grasslands and other open habitats with low, sparse vegetation, generally where trees and large shrubs are absent (Zeiner et al. 1990).	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to the project site.
Geothlypis trichas sinuosus saltmarsh common yellowthroat	--/--/SSC	Breeds in brackish- and freshwater marsh and woody swamps between mid-March and late July. Inhabits breeding habitat year-round. Builds nests close to the ground in grasses, tules, cattails, or shrubs (Shuford and Gardali 2008).	Will not occur	There is no suitable salt marsh habitat in the project site. Suitable nesting habitat is present in small isolated saline emergent wetland ponds near the project site; however, this species has not been observed on the project site or in the adjacent marsh during multiple biological surveys in 2019, 2020 and 2021.
Haliaeetus leucocephalus Bald eagle	FD/SE/FP	Requires large bodies of water with an abundant fish population. Feeds on fish, carrion, small	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		mammals, and water-fowl. Nests are usually located within a 1-mile radius of water. Nests are most often situated in large trees with a commanding view of the area (Zeiner et al. 1990).		the project site.
Laterallus jamaicensis coturniculus California black rail	--/ST/FP	Inhabits brackish marsh, primarily in the upper marsh zone dominated by alkali heath (*Frankenia salina*), cattail, and rush (*Juncus*); prefers lower salinity environments. Forage on the ground, under cover of dense vegetation (USFWS 2013).	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to the project site.
Melospiza melodia pusillula Alameda song sparrow	--/--/SSC	Endemic to the tidal salt marshes around the southern margins of San Francisco Bay, especially near Dumbarton Point in Alameda County. Inhabits tidally-influenced areas with vegetation tall enough to keep nests above high tides, and openings to allow foraging on the ground. Adapted to highly saline environments (Shuford and Gardali 2008).	Will not occur	This species was observed adjacent to the site during a site visit on February 28, 2020. There is no suitable nesting or foraging habitat in or adjacent to the project site.
Phalacrocorax auratus double-crested cormorant	--/--/WL	Found along the entire coast of California and on inland lakes, in fresh, salt and estuarine waters. Roosts overnight beside water on offshore rocks, islands, steep cliffs, dead branches of trees and manmade structures (Zeiner et al. 1990).	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to the project site.
Rallus obsoletus obsoletus California Ridgway's rail	FE/SE/FP	Salt-water and brackish marshes traversed by tidal sloughs in the vicinity of San Francisco Bay. Associated with abundant growths of pickleweed but feeds away from cover on invertebrates from mud-bottomed sloughs.	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to the project site.
Riparia riparia bank swallow	--/ST/--	Primarily inhabits riparian and other lowland habitats west of the deserts during the spring-fall period. In summer, restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes. In California, bank swallow primarily nests from Siskiyou,	Will not occur	There are no suitable vertical banks, bluffs, or cliffs with fine textured soil and holes in or near the project site.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		Shasta and Lassen Counties south along the Sacramento River to Yolo County. Also nests locally across much of state.		
Rynchops niger black skimmer	--/--/SSC	Nests unvegetated sites on gravel bars, low islets and sandy beaches. Nests in colonies of 200 individuals or less (Burger 1981).	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to the project site.
Setophaga petechia yellow warbler	--/--/SSC	Found in riparian areas in close proximity to water, also nests in montane shrubbery in open conifer forests in the Cascades and Sierra Nevada. Nests and forages in willow (*Salix* sp.) shrubs and thickets and in other riparian plants including cottonwoods (*Populus* sp.), sycamores (*Platanus* sp.), ash (*Fraxinus* sp.), and alders (*Alnus* sp.) (Browning 1994).	Will not occur	There is no suitable nesting or foraging habitat in or adjacent to the project site.
Sterna antillarum browni California least tern	FE/SE/--	Breeding season resident of California, typically present between April and August. Naturally nest in large colonies on sandy beaches and dunes, but often displaced to other bare areas such as mud and sand flats, landfills, and airports. Forages on fish from estuaries, lagoons, and nearshore ocean (USFWS 1985).	Will not occur	There is no suitable sandy beach, dune, or mudflat habitat in or adjacent to the project site.
Mammals				
Antrozous pallidus pallid bat	--/--/SSC	Occurs throughout California except for the high Sierra Nevada and the northern Coast Ranges. Habitats include grasslands, shrublands, woodlands, and forests from sea level to 6,000 feet. Most common in open, dry habitats with rocky areas for roosting; roosts also include cliffs, abandoned buildings, bird boxes, and under bridges (Bolster, ed. 1998).	Will not occur	There is no suitable roosting or foraging habitat in the project site.
Corynorhinus townsendii Townsend's big-eared bat	--/--/SSC	Widely distributed throughout California except alpine and subalpine habitats. This species eats moths, beetle and other insects which it catches on the wing or by gleaning from vegetation.	Will not occur	There is no suitable roosting or foraging habitat in the project site.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		Typically found near water since it is poor at concentrating its urine. This species uses caves, mines, tunnels, buildings and human made structures for roosting. Maternity roosts are typically in warm sites. Hibernation sites are typically cold, but not freezing. This species is very sensitive to disturbance and may abandon its roost after one visit (Zeiner et al. 1990).		
Eumops perotis californicus western mastiff bat	--/--/SSC	Found throughout California and the southwestern U.S. to west Texas. Roosts in natural crevices in large outcrops of granite, sandstone, or basalt, on cliff faces, among boulders, and in appropriately proportioned cracks in buildings. Roosts are at least 10 feet above the ground (Bolster 1998).	Will not occur	There is no suitable roosting or foraging habitat in the project site.
Neotoma fuscipes annectens San Francisco dusky-footed woodrat	--/--/SSC	This species is widespread and inhabits a wide range of habitats in California with canopy closure and a dense understory such as oak woodlands or riparian forests. Builds nests that may be as large as 8 feet wide and 8 feet tall. Nests are typically built at the base of trees, stumps, shrubs or other structures. Woodrats will defend their nests from competitors. Diet consists mainly of vegetation, such as leaves, grasses, flowers, and acorns. May also eat fungi (Zeiner et al. 1990).	Will not occur	There is no suitable woodland habitat in the project site.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
Reithrodontomys raviventris salt marsh harvest mouse	FE/SE/--	Endemic to tidal and brackish marsh habitat in the San Francisco Bay region. Favors dense (100-percent) cover of perennial marsh vegetation 30-50 cm tall, at least 60-percent pickleweed (*Sarcocornia* sp.), fat hen (*Atriplex patula*), and alkali heath (*Frankenia salina*), without large amounts of saltgrass (*Distichlis spicata*), brass buttons (*Cotula coronopifolia*), or monocots (*Typha*, *Schoenoplectus*, or *Bolboschoenus*) which do not provide suitable vegetation structure (USFWS 1984b). May utilize adjacent grasslands for foraging during spring and early summer. Populations require at least 150 acres of suitable habitat (USFWS 2010a).	Will not occur	The project site lacks tidal and brackish marsh habitat and also does not contain any pickleweed. There are also no suitable tidal or brackish marsh habitats with pickleweed adjacent to the site. The brackish wetland habitat adjacent to the site is dominated by monocots (*Typha* and *Schoenoplectus*) and is not suitable habitat for salt marsh harvest mouse. Therefore, there is no suitable habitat for this species on or adjacent to the project site and no potential for it to occur or be impacted by the project.
Scapanus latimanus parvus Alameda Island mole	--/--/SSC	Only occurs on Alameda Island. Found in annual and perennial grasslands and prefers moist, friable soils and avoids flooded soils (Hall 1981).	Will not occur	There is no suitable habitat for this species on the project site. Site is outside of the species range.
Sorex vagrans halicoetes salt-marsh wandering shrew	--/--/SSC	Inhabits the middle zone of coastal salt marsh that is inundated only at high tide and is characterized by a dense cover of pickleweed (*Sarcocornia* sp.) 30-60 cm tall, with driftwood and other debris lying directly on the vegetation. Uses high marsh as refuge from spring tides, and forages in low marsh only during low tide. Shares habitat affinities with salt marsh harvest mouse and California clapper rail, but uses a narrower range of habitats (Bolster, ed. 1998).	Will not occur	There is no suitable habitat for this species on the project site.
Taxidea taxus American badger	--/--/SSC	Inhabits drier open stages of most shrub, forest, and herbaceous habitats with loose, friable soils. Preys on a wide variety of mammals, reptiles, birds, and carrion, and hunts mostly by digging	Will not occur	There is no suitable habitat for this species on the project site.

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		out fossorial prey. Occasionally takes prey on the surface. Not tolerant of cultivation. No longer occur in the Central Valley except in the extreme western edge (Williams 1986).		
Vulpes macrotis mutica San Joaquin kit fox	FE/ST/--	Inhabits grasslands, agricultural areas, playas, and scrublands. Formerly widespread in the Central Valley; now primarily found in foothills at the margins of the Central Valley and in the interior Coast Ranges. Uses natural and artificial burrows with entrances between 8 and 10 inches in diameter and occupies many different burrows in a single season (USFWS 2010b).	Will not occur	There is no suitable habitat for this species on the project site.
Plants				
Acanthomintha duttonii San Mateo thorn-mint	FE/SE/1B.1	An annual herb found in serpentinite soils in valley and foothill grasslands, and chaparral, from 50 to 300 meters in elevation. Blooms April to June (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Allium peninsulare var. *franciscanum* Franciscan onion	--/--/1B.2	A perennial bulbiferous herb found on volcanic, and often serpentine, clay soils in cismontane woodland and valley and foothill grassland from 52 – 305 meters elevation. Blooms (April) May – June (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Amsinckia lunaris bent-flowered fiddleneck	--/--/1B.2	An annual herb found in coastal bluff scrub, cismontane woodland, and valley and foothill grassland from 3 – 500 meters elevation. Blooms March – June (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Arctostaphylos regismontana Kings Mountain manzanita	--/--/1B.2	A perennial evergreen shrub found on granitic or sandstone soils in broadleafed upland forest, north coast coniferous forest, and chaparral from 305 – 735 meters elevation. Blooms December – April (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Astragalus tener var. *tener* alkali milk vetch	--/--/1B.2	An annual herb found in alkaline playas, clay soils in valley and foothill grasslands, and vernal pools, from 1 to 60 meters in elevation. Currently	Will not occur	There is no suitable habitat for this species on the project site.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		known to occur in Alameda, Napa, Solano, and Yolo counties. Blooms March to June (CNPS 2021).		
Atriplex depressa brittlescale	--/--/1B.2	An annual herb found on alkaline, clay soils in chenopod scrub, meadows, seeps, playas, vernal pools, and valley and foothill grasslands from 1 – 320 meters elevation. Blooms April – October (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Atriplex minuscula lesser saltscale	--/--/1B.1	An annual herb found on sandy alkaline soils in chenopod scrub, playas, and valley and foothill grasslands in the Central Valley from 15 – 200 meters elevation. Blooms May – October (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Balsamorhiza macrolepis big-scale balsamroot	--/--/1B.2	A perennial herb found on slopes in chaparral, cismontane woodland, and valley and foothill grassland, sometimes in serpentine soil. Elevation range 45 – 1,555 meters. Blooms March – June (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Campanula exigua chaparral harebell	--/--/1B.2	An annual herb found on rocky, usually serpentine, soils in chaparral from 275 – 1,250 meters elevation in the Diablo Range. Blooms May – June (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site. Project site is outside of species range.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
Centromadia parryi ssp. *congdonii* Congdon's tarplant	--/--/1B.1	An annual herb found on alkaline soils in valley and foothill grassland, from 0 to 240 meters elevation. Currently known to occur in Alameda, Contra Costa, Monterey, San Luis Obispo, Santa Clara, and San Mateo counties. Blooms May to November (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site. Much of the surface soil on the site has been disturbed and/or removed due to soil remediation and vegetation is regularly maintained. This species was not observed on the project site during focused botanical surveys conducted during the blooming season in May and June 2019 and has never been observed on the site during any of the biological surveys.
Chloropyron maritimum ssp. *palustre* Point Reyes salty bird's-beak	--/--/1B.2	An hemiparasitic annual herb found in coastal marshes and swamps, from 0 to 230 meters in elevation. Currently considered to be extirpated in the South Bay including Alameda County. Blooms June to October (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Chorizanthe robusta var. *robusta* robust spineflower	FE/--/1B.1	An annual herb found on sandy or gravelly soils in maritime chaparral, openings in cismontane woodland, coastal dunes, and coastal scrub from 3 – 300 meters elevation. Currently known only from Santa Cruz and Monterey Counties and possibly San Francisco County. Blooms April – September (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site. Only recorded occurrences in the vicinity of the project site are from 1894 and 1882.
Cirsium fontinale var. *fontinale* fountain thistle	FE/SE/1B.1	A perennial herb found in serpentinite seeps in chaparral openings, cismontane woodlands, meadows, seeps, and valley and foothill grasslands from 45 to 175 meters elevation. Blooms (April) May – October. Known only from the vicinity of Crystal Springs Reservoir (CNPS 2021)	Will not occur	There is no suitable habitat for this species on the project site.
Collinsia corymbosa round-headed Chinese-	--/--/1B.2	An annual herb found in coastal dunes from 0 – 20 meters elevation. Blooms April – June (CNPS	Will not occur	There is no suitable habitat for this species on the project site.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
houses		2021).		
Collinsia multicolor San Francisco collinsia	--/--/1B.2	An annual herb found in closed-cone coniferous forest and coastal scrub from 30 – 250 meters elevation, sometimes on serpentine soil. Blooms (February) March – May (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Dirca occidentalis western leatherwood	--/--/1B.2	A perennial deciduous shrub found in mesic microsites in broadleafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, and riparian woodland from 25 – 425 meters elevation. Blooms January – March (April) (CNPS 2021).	Will not occur	There is no suitable woodland and chaparral habitat for this species on the project site.
Eryngium aristulatum var. *hooveri* Hoover's button-celery	--/--/1B.1	An annual or perennial herb found in vernal pools, from 3 to 45 meters in elevation. Currently known to occur in Alameda, San Benito, San Diego, and San Luis Obispo counties. Blooms June to August (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site. The small seasonal wetlands are not suitable habitat for this species. In addition, this species was not observed on the project site during focused botanical surveys conducted during the blooming season in June 2019 and has never been observed on the site during any of the biological surveys.
Eryngium jepsonii Jepson's coyote-thistle	--/--/1B.2	A perennial herb on clay soils in vernal pools and valley and foothill grassland from 3 – 300 meters elevation. Blooms April – August (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
Extriplex joaquiniana San Joaquin spearscale	--/--/1B.2	An annual herb found in chenopod scrub, meadows and seeps, playas, and valley and foothill grassland (alkaline), from 1 to 835 meters in elevation. Currently known to occur in Alameda, Contra Costa, Colusa, Fresno, Glenn, Merced, Monterey, Napa, San Benito, Santa Clara, San Joaquin, San Luis Obispo, Solano, Tulare, and Yolo counties. Blooms April to October (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Fritillaria liliacea fragrant fritillary	--/--/1B.2	A perennial bulbiferous herb found usually on serpentine soils in cismontane woodland, coastal prairie, coastal scrub, and valley and foothill grassland from 3 – 410 meters elevation. Blooms February – April (CNPS 2021).	Will not occur	There is no suitable habitat or soils for this species on the project site.
Gilia millefoliata dark-eyed gilia	--/--/1B.2	An annual herb found on coastal dunes from 3 – 30 meters elevation. Blooms April – June (CNPS 2021).	Will not occur	There is no suitable dune habitat for this species on the project site.
Helianthella castanea Diablo helianthella	--/--/1B.2	A perennial herb found on rocky, azonal soils in partial shade, in broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland from 60 – 1,300 meters elevation. Blooms March – June (CNPS 2021).	Will not occur	There is no suitable habitat or soils for this species on the project site.
Hesperolinon congestum Marin western flax	FT/ST/1B.1	An annual herb occurs in chaparral, valley and foothill grassland. Usually occurs in serpentinite soil from 5 – 370 meters elevation. Blooms April – July (CNPS 2021).	Will not occur	There is no suitable habitat or soils for this species on the project site.
Hoita strobilina Loma Prieta hoita	--/--/1B.1	A perennial herb found usually on serpentine soils in mesic microsites in chaparral, cismontane woodland, and riparian woodland from 30 – 860 meters elevation. Presumed extirpated from Alameda County. Blooms May – July (August – October) (CNPS 2021).	Will not occur	There is no suitable habitat or soils for this species on the project site.
Holocarpha macradenia	FT/SE/1B.1	An annual herb found on sandy clay soils in	Will not occur	There is no suitable habitat or

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
Santa Cruz tarplant		coastal prairie, coastal scrub, and valley and foothill grassland from 10 – 220 meters elevation. All known natural occurrences are in Santa Cruz County. Blooms June – October (CNPS 2021).		soils for this species on the project site.
Horkelia cuneata var. sericea Kellogg's horkelia	--/--/1B.1	A perennial herb found in sandy or gravelly openings in closed-cone coniferous forest, maritime chaparral, coastal dunes, and coastal scrub from 10 – 200 meters elevation. Extirpated from the San Francisco Bay Area except for 1 location in San Mateo County. Blooms April – September (CNPS 2021).	Will not occur	There is no suitable habitat or soils for this species on the project site.
Lasthenia conjugens Contra Costa goldfields	FE/--/1B.1	An annual herb found in alkaline playas, valley and foothill grassland, vernal pools, and cismontane woodland, from 0 to 470 meters in elevation. Currently known to occur in Alameda, Contra Costa, Marin, Monterey, Napa, Solano, and Sonoma counties. Blooms March to June (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Malacothamnus arcuatus arcuate bush-mallow	--/--/1B.2	A perennial evergreen shrub found in chaparral and cismontane woodland from 15 to 355 meters elevation. Blooms April to September (CNPS 2021)	Will not occur	There is no suitable habitat for this species on the project site.
Malacothamnus davidsonii Davidson's bush-mallow	--/--/1B.2	A perennial evergreen shrub found in chaparral, coastal scrub, riparian woodland and cismontane woodland from 185 to 1140 meters elevation. Blooms June to January (CNPS 2021)	Will not occur	There is no suitable habitat for this species on the project site.
Malacothamnus hallii Hall's bush-mallow	--/--/1B.2	A perennial evergreen shrub found in chaparral and coastal scrub from 10 – 760 meters elevation. Blooms (April) May – September (October) (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Monolopia gracilens woodland woollythreads	--/--/1B.2	An annual herb found on serpentine soils in broadleafed upland forest, chaparral, cismontane woodland, North Coast coniferous forest, and	Will not occur	There is no suitable habitat or soils for this species on the project site.

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		valley and foothill grassland from 100 – 1,200 meters elevation. Blooms (February) March – July (CNPS 2021).		
Navarretia paradoxiclara Patterson's navarretia	--/--/1B.3	An annual herb found on serpentine soils in vernally mesic meadows and seeps, from 150 to 430 meters in elevation. Currently known to occur in Calaveras and Tuolumne counties. Blooms May to July (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Plagiobothrys chorisianus var. chorisianus Choris' popcornflower	--/--/1B.2	An annual herb found in mesic microsites in chaparral, coastal prairie, and coastal scrub from 3 – 160 meters elevation. Currently known from locations on the coast between Salinas and San Francisco. Blooms March – June (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Plagiobothrys glaber hairless popcornflower	--/--/1A	An annual herb found in alkaline meadows and seeps and coastal salt marshes, from 15 to 180 meters in elevation. Formerly known to occur in Alameda, Marin, San Benito, and Santa Clara counties; now presumed extinct in California and rare elsewhere. Blooms March to May (CNPS 2020).	Will not occur	There is no suitable habitat for this species on the project site.
Polemonium carneum Oregon polemonium	--/--/2B.2	A perennial herb found in coastal prairie, coastal scrub, and lower montane coniferous forest from 0 – 1,830 meters elevation. Blooms April – September (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Puccinellia simplex California alkali grass	--/--/1B.2	An annual herb found in alkaline, vernally mesic sinks, flats, and lake margins in chenopod scrub, meadows, seeps, vernal pools, and valley and foothill grasslands from 2 – 930 meters elevation. Blooms March – May (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Sanicula maritima adobe sanicle	--/SR/1B.1	A perennial herb found on serpentine clay soils in chaparral, coastal prairie, meadows, seeps, and valley and foothill grassland from 30 – 240 meters elevation. Currently known only from Monterey and San Luis Obispo Counties. Blooms	Will not occur	There is no suitable habitat or soils for this species on the project site.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		February – May (CNPS 2021).		
Senecio aphanactis chaparral ragwort	--/--/2B.2	An annual herb found in chaparral, cismontane woodland, and coastal scrub, from 15 to 800 meters in elevation. Currently known to occur in Alameda, Contra Costa, Fresno, Los Angeles, Merced, Monterey, Orange, Riverside, San Benito, Santa Barbara, Santa Clara, Santa Cruz, San Diego, San Luis Obispo, Solano, and Ventura counties. Blooms January to May (CNPS 2020).	Will not occur	There is no suitable habitat for this species on the project site.
Stuckenia filiformis ssp. *alpina* slender-leaved pondweed	--/--/2B.2	A perennial herb found in shallow freshwater marshes and swamps, from 300 to 2,150 meters in elevation. Currently known to occur in Alameda, Butte, Contra Costa, El Dorado, Lassen, Mariposa, Merced, Modoc, Mono, Nevada, Placer, San Mateo, Shasta, Sierra, Solano, and Sonoma counties. Blooms May to July (CNPS 2020).	Will not occur	There is no suitable habitat for this species on the project site.
Spergularia macrotheca var. *longistyla* long-styled sand-spurrey	--/--/1B.2	Annual herb. Occurs in marshes and swamps, meadows and seeps and hot springs. Occurs in alkaline conditions. Elevation: 0 – 255 m amsl. Flowering period February – May (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Streptanthus albidus ssp. peramoenus most beautiful jewelflower	--/--/1B.2	An annual herb found on serpentine soils in chaparral, cismontane woodland, and valley and foothill grassland from 95 – 1,000 meters elevation. Blooms (March) April – September (October) (CNPS 2021).	Will not occur	There is no suitable habitat or soils for this species on the project site.
Stuckenia filiformis ssp. alpina slender-leaved pondweed	--/--/2B.2	A perennial rhizomatous aquatic herb found in marshes, swamps, and other shallow freshwater habitats from 300 – 2,150 meters elevation. Blooms May – July (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.
Suaeda californica California seablite	FE/--/1B.1	A perennial evergreen shrub found in coastal salt marshes and swamps from 0 – 15 meters elevation. Nearly extirpated from the Bay Area;	Will not occur	There is no suitable habitat for this species on the project site.

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
		most known occurrences are in Morro Bay. Blooms July – October (CNPS 2021).		
Trifolium amoenum two-fork clover	FE/--/1B.1	An annual herb found in coastal bluff scrub and valley and foothill grassland from 5 – 415 meters elevation; sometimes on serpentine soils. Most records are historic; recent rediscoveries are uncertain. Blooms April – June (CNPS 2021).	Will not occur	There is no suitable habitat or soils for this species on the project site.
Trifolium hydrophilum saline clover	--/--/1B.2	An annual herb found in marshes and swamps, mesic alkaline valley and foothill grassland, and vernal pools, from 0 to 300 meters in elevation. Currently known to occur in Alameda, Contra Costa, Lake, Monterey, Napa, Sacramento, San Benito, San Joaquin, San Luis Obispo, San Mateo, Santa Clara, Santa Cruz, Solano, Sonoma, and Yolo counties. Blooms April to June (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site. Much of the surface soil on the site has been disturbed and/or removed due to soil remediation and vegetation is regularly maintained. This species was not observed on the project site during focused botanical surveys conducted during the blooming season in April, May and June 2019 and has never been observed on the site during any of the biological surveys including in April 2021.
Tropidocarpum capparideum caper-fruited tropidocarpum	--/--/1B.1	An annual herb found on alkaline hills in valley and foothill grassland from 1 – 455 meters elevation. Formerly presumed extinct; rediscovered in 2000 on Fort Hunter Liggett in Monterey County. Currently known only from Monterey, San Luis Obispo, and Fresno Counties. Blooms March – April (CNPS 2021).	Will not occur	There is no suitable habitat for this species on the project site.

Appendix C (cont.)
Potential for Special-Status Species to Occur in the Project Site

Scientific Name/Common Name	FESA/CESA/ CRPR or Other State Status*	General Habitat Description	Potential to Occur	Rationale
Sensitive Natural Habitats				
Northern Coastal Salt Marsh	--/--/--; G3, S3.2	A highly productive community of salt-tolerant, winter-dormant species that occurs in areas subject to daily tidal inundation by salt water. Occurs along sheltered margins of bays and estuaries. Vegetation is typically stratified horizontally, with cordgrass (*Spartina*) in the lowest zone, pickleweed (*Sarcocornia*) in the middle zone, and alkali heath (*Frankenia salina*) and gumplant (*Grindelia*) dominant in the upper zone (Holland 1986).	Not present	Northern coastal salt marsh habitat is not present on site.

Note: Bold font indicates a species with the potential to occur in the project site; these species are evaluated in detail in the body of the report.

*FESA=Federal Endangered Species Act; CESA=California Endangered Species Act; FE – FESA endangered; FT – FESA threatened; FC – FESA candidate; FD – FESA delisted; SE – CESA endangered; ST – CESA threatened; FP – Fully Protected; SSC – state species of special concern; CRPR – California Rare Plant Rank (see definitions of CRPR rankings below)
CNPS ratings:
- 1A = Presumed extirpated in California and rare elsewhere
- 1B = Rare, threatened, or endangered in California and elsewhere
  - 1B.1 = Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)
  - 1B.2 = Fairly endangered in California (20-80% occurrences threatened)
  - 1B.3 = Not very endangered in California (fewer than 20% of occurrences threatened)
- 2B = Rare, threatened, or endangered in California but more common elsewhere.
  - 2B.2 = Fairly endangered in California (20-80% occurrences threatened)

Global and State rankings in descending order of sensitivity (1=critically imperiled; 5=demonstrably secure).

Status in the Project site is assessed as follows. **Will Not Occur**: Species is either sessile (i.e., plants) or so limited to a particular habitat that it cannot disperse on its own and/or habitat suitable for its establishment and survival does not occur on the project site; **Not Expected**: Species moves freely and might disperse through or across the project site, but suitable habitat for residence or breeding does not occur on the project site, potential for an individual of the species to disperse through or forage in the site cannot be excluded with 100% certainty; **Presumed Absent:** Habitat suitable for residence and breeding occurs on the project site; however, focused surveys conducted for the current project were negative; **May Occur**: Species was not observed on the site and breeding habitat is not present but the species has the potential to utilize the site for dispersal; **High**: Habitat suitable for residence and breeding occurs on the project site and the species has been recorded recently on or near the project site, but was not observed during surveys for the current project; **Present**: The species was observed during biological surveys for the current project and is assumed to occupy the project site or utilize the project site during some portion of its life cycle.

Appendix D

Plant and Wildlife Species Observed in the Project Site

Appendix D
Plant and Wildlife Species Observed in the Project Site

Table D-1. Plant Species Observed in the Project Site

Family	Species Name	Common Name	Status[1]
Native			
Asteraceae	*Baccharis pilularis*	coyote brush	--
	Centromadia pungens ssp. *pungens*	common tarweed	--
	Lasthenia californica	California goldfields	--
	Layia sp.	tidy tips	--
	Pseudognaphalium canescens	everlasting	--
Boraginaceae	*Plagiobothrys* sp.	popcorn flower	--
Chenopodiaceae	*Atriplex lentiformis*	quail saltbush	--
Cyperaceae	*Cyperus eragrostis*	tall flatsedge	--
	Schoenoplectus californicus	California bulrush	--
Fabaceae	*Acmispon americanus*	Spanish lotus	--
	Lupinus succulentus	arroyo lupine	--
	Vicia 1mericana	American vetch	--
Fagaceae	*Quercus agrifolia*	coast live oak	--
Frankeniaceae	*Frankenia salina*	alkali-heath	--
Iridaceae	*Sisyrinchium bellum*	blue-eyed grass	--
Juncaceae	*Juncus bufonius*	toad rush	--
Onagraceae	*Epilobium brachycarpum*	annual fireweed	--
Papaveraceae	*Eschscholzia californica*	California poppy	--
Pinaceae	*Pinus radiata*	Monterey pine	--
Plantaginaceae	*Plantago erecta*	California plantain	--
Poaceae	*Hordeum brachyantherum*	meadow barley	--
	Distichlis spicata	saltgrass	--
	Elymus triticoides	beardless wild rye	--
Salicaceae	*Salix laevigata*	red willow	--
Typhaceae	*Typha latifolia*	common cattail	--
Non-Native			
Aizoaceae	*Carpobrotus edulis*	hottentot-fig	High
	Mesembryanthemum nodiflorum	slender-leaved iceplant	--
Apiaceae	*Foeniculum vulgare*	fennel	High
Arecaceae	*Washingtonia robusta*	Mexican fan palm	--
Asteraceae	*Cirsium vulgare*	bull thistle	Moderate
	Cotula coronopifolia	common brassbuttons	Limited
	Dittrichia graveolens	stinkwort	Moderate
	Erigeron bonariensis	flax-leaf fleabane	--
	Helminthotheca echioides	bristly ox-tongue	Limited
	Silybum marianum	milk thistle	Limited
	Sonchus oleraceus	common sow thistle	--
Brassicaceae	*Brassica rapa*	common mustard	Limited
	Lepidium latifolium	perennial pepperweed	High
	Raphanus sativus	wild radish	Limited
Chenopodiaceae	*Salsola soda*	alkali Russian thistle	Moderate
Fabaceae	*Medicago polymorpha*	burclover	Limited
	Melilotus indicus	Indian sweet clover	--
	Trifolium hirtum	rose clover	Limited

Appendix D (cont.)
Plant and Wildlife Species Observed in the Project Site

Family	Species Name	Common Name	Status[1]
Fagaceae	*Quercus suber*	cork oak	--
Geraniaceae	*Erodium cicutarium*	redstem filaree	Limited
	Geranium dissectum	cutleaf geranium	Limited
Lythraceae	*Lythrum hyssopifolia*	Hyssop loosestrife	Limited
Malvaceae	*Malva parviflora*	cheeseweed	--
Myrsinaceae	*Lysimachia arvensis*	scarlet pimpernel	--
Oleaceae	*Fraxinus uhdei*	Shamel ash	--
Oxalidaceae	*Oxalis pes-caprae*	sourgrass	Moderate
Plantaginaceae	*Linaria bipartita*	split-lip toadflax	--
	Plantago coronopus	cutleaf plantain	--
Poaceae	*Avena fatua*	wild oats	Moderate
	Brachypodium distachyon	false purple brome	Moderate
	Bromus diandrus	common ripgut grass	Moderate
	Bromus hordeaceus	soft brome	Limited
	Bromus madritensis ssp. *Rubens*	red brome	--
	Cortaderia selloana	white pampasgrass	High
	Crypsis schoenoides	Swamp picklegrass	--
	Festuca myuros	fescue	--
	Festuca perennis	Italian ryegrass	--
	Hordeum marinum ssp. *gussoneanum*	Mediterranean barley	--
	Hordeum murinum	hare barley	Moderate
	Poa annua	annual blue grass	--
Polygonaceae	*Rumex pulcher*	fiddle dock	--
Rosaceae	*Rubus armeniacus*	Himalayan blackberry	High
Sapindaceae	*Cupaniopsis anacardioides*	carrotwood	--

[1] Status for native species is California Rare Plant Rank;
Status for non-native species is California Invasive Plant Council invasiveness rating

Table D-2. Wildlife Species Observed in the Project Site

Order/Family	Species Name	Common Name	Status[1]
Amphibians			
Anura			
Hylidae	*Pseudacris sierra*	Sierran treefrog	--
Reptiles			
Squamata			
Colubridae	*Thamnophis sirtalis infernalis*	California red-sided garter snake	--
Birds			
Accipitriformes			
Accipitridae	*Accipiter cooperii*	Cooper's hawk	WL
	Aquila chrysaetos	Golden eagle	FP
	Buteo jamaicensis	red-tailed hawk	--
	Elanus leucurus	white-tailed kite	FP
Anseriformes			
Anatidae	*Anas platyrhynchos*	mallard	--
	Branta canadensis	Canada goose	--
Caprimulgiformes			
Trochillidae	*Calypte anna*	Anna's hummingbird	--
Cathartiformes			
Cathartidae	*Cathartes aura*	turkey vulture	--
Charadriiformes			
Charadriidae	*Charadrius vociferous*	killdeer	--
Columbiformes			
Columbidae	*Columbia livia*	rock pigeon	--
	Zenaida macroura	mourning dove	--
Facloniformes			
Falconidae	*Falco columbarius*	Merlin	WL
	Falco sparverius	American kestrel	--
Passeriformes			
Corvidae	*Aphelocoma californica*	California scrub-jay	--
	Corvus brachyrhynchos	American crow	--
	Corvus corax	common raven	--
Emberizidae			--
Fringillidae	*Haemorhous mexicanus*	house finch	--
Hirundinidae	*Tachycineta bicolor*	tree swallow	
Icteridae	*Agelaius phoeniceus*	red-winged blackbird	--
	Sturnella neglecta	western meadowlark	--
Mimidae	*Mimus polyglottos*	northern mockingbird	--
Parulidae	*Setophaga coronate*	yellow-rumped warbler	--
Passerellidae	*Melospiza melodia*	Song sparrow	SSC
	Passerculus sandwichensis	savannah sparrow	--
	Zonotrichia atricapilla	golden-crowned sparrow	--
	Zonotrichia leucophrys	white-crowned sparrow	--
Sturnidae	*Sturnus vulgaris*	European starling	--
Tyrannidae	*Sayornis nigricans*	black phoebe	--
	Sayornis saya	Say's phoebe	--

Appendix D (cont.)
Plant and Wildlife Species Observed in the Project Site

Order/Family	Species Name	Common Name	Status[1]
Mammals			
Carnivora			
Canidae	*Urocyon cinereoargenteus*	gray fox	--
Lagomorpha			
Leporidae	*Lepus californicus*	black-tailed jackrabbit	--
Rodentia			
Geomyidae	*Thomomys bottae*	Botta's pocket gopher	--
Sciuridae	*Otospermophilus beecheyi*	California ground squirrel	--

[1] FP=Fully Protected

Appendix E

Arborist Letter Report

HELIX Environmental Planning, Inc.
11 Natoma Street
Folsom, CA 95630
916.365.8702 tel
619.462.0552 fax
www.**helixepi**.com

April 5, 2019

Mr. Glenn Brown, VP Entitlements
Integral Communities
500 La Gonda Way, Suite #102
Danville, CA 94526

RE: Certified Arborist Tree Inventory for the FMC Willow Project Site, City of Newark, California

On behalf of Integral Communities, HELIX Environmental Planning, Inc. (HELIX) conducted an inventory of trees protected under Chapter 8.16 of the City of Newark Municipal Code, entitled *Preservation of Trees on Private Property*, for the FMC Willow Project. This technical memorandum documents the results of the tree inventory.

The City of Newark protects trees as windbreaks essential to public health and safety. The City of Newark Municipal Code Chapter 8.16.02 requires that a permit be obtained from the Public Works Director to cut down, destroy, remove, or move trees when growing on any parcel except developed residential parcels less than ten thousand square feet in area. A tree is defined in the ordinance as any live perennial woody plant with at least one well-defined stem 6 inches or greater in diameter measured at 48 inches above grade (dbh). The purpose of the tree inventory was to document existing trees in the project site in support of an application for tree removal from the Public Works Director, if such a permit is necessary.

PROJECT LOCATION AND DESCRIPTION

The project site is in west-central Newark, at the western terminus of Enterprise Drive; the street address is 8787 Enterprise Drive. The project site comprises all or part of the following City of Newark Assessor's parcels: 537-852-1-2, 537-852-2-7, and 92-100-5. The total area of the project site is 24 acres. Refer to **Attachment A** for a regional location map.

The project site is a former industrial chemical plant that was active until the 1990s. The site has been subject to remediation for environmental contamination and the entire site is currently in a disturbed condition, with gravel driveways, concrete pads, and extensive evidence of grading and placement of fill and soil stockpiles. Vegetation in the site is predominantly weedy grasses and forbs with ornamental

trees around the perimeter. The proposed project is transit-oriented residential development and a park. The entire project site would be developed.

METHODS

An inventory of trees in the project site was conducted on April 4, 2019 by International Society of Arboriculture Certified Arborist George Aldridge (WE-11778A). All woody plants in the project site meeting the City's definition of a tree were assessed. The locations of all trees with one or more trunks with a diameter of 6 inches or greater when measured at 48 inches above ground level were recorded using an EOS Systems Arrow 100 GNSS receiver. Each tree included in the inventory was identified with a numbered metal tag.

In addition to measured diameter, trees were assessed for dripline radius, height, structural condition, and health. Structure and health were assessed by a visual inspection of trunk, foliage, and root crown. Each tree was assigned an overall rating on a scale of 0 (dead), 1 (severe decline), 2 (declining), 3 (fair), 4 (good), or 5 (excellent). Height and dripline were visually estimated. A Tree Location Map documenting the location of each tree in the inventory is included as **Attachment B**; the survey data are compiled in **Attachment C**. Criteria used for assessing health and structure of trees are provided in **Attachment D**.

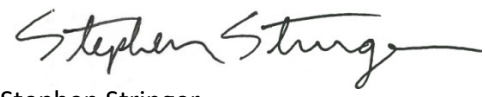
RESULTS

A total of 34 trees meeting the size threshold for protection were identified in the project site; two of these are dead. The condition of the 32 live trees ranged from good to declining. Tree species present included Monterey pine (*Pinus radiata*), shamel ash (*Fraxinus uhdei*), carrotwood (*Cupaniopsis anacardioides*), cork oak (*Quercus suber*), Coast live oak (*Quercus agrifolia*), and Mexican fan palm (*Washingtonia robusta*).

SUMMARY

A total of 32 trees meeting the City of Newark Municipal Code definition of protected trees were identified in the project site. These trees do not provide a windbreak on which a substantial number of people depend, and therefore are eligible for removal to facilitate development of the proposed project. A permit would likely be required from the City of Newark Public Works Director prior to removal, destruction, or transplantation of any trees included in the inventory. If you have any questions or comments regarding the results of the survey, please do not hesitate to contact me by e-mail at stephens@helixepi.com or by phone at (916) 365-8700 x 102.

Sincerely,



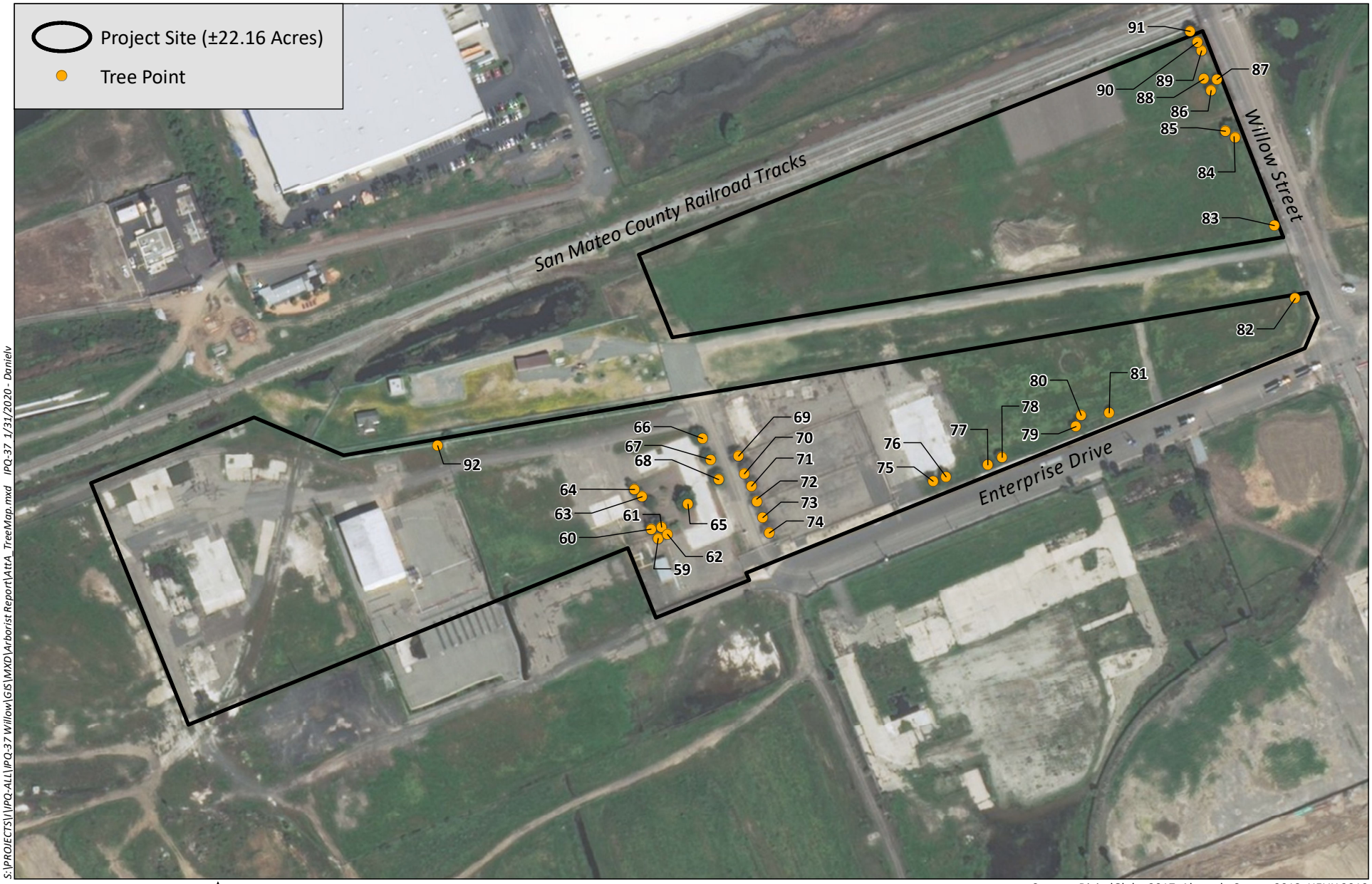
Stephen Stringer
Senior Biologist, Certified Arborist

Attachments:

Attachment A. Arborist Survey Map
Attachment B. Arborist Survey Datasheets
Attachment C. Assessment Criteria

Attachment A

Arborist Survey Map



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0 250 Feet

Source: DigitalGlobe 2017, Alameda County 2018, HELIX 2019

HELIX Environmental Planning

Tree Map

Attachment A

Attachment B

Arborist Survey Datasheets

Table B-1. Tree Inventory Data

Tag #	Species	DBH (in.)	Dripline (ft.)	Height (ft.)	Health[1]	Struct[1]	Rating[2]	Notes[3]
59	*Quercus suber* (cork oak)	14.0, 12.2	18	15	G	G	4	shaded
60	*Quercus suber* (cork oak)	15.5	18	15	G	G	4	
61	*Pinus radiata* (Monterey pine)	17.2	18	25	G	F	3	leans; OL
62	*Pinus radiata* (Monterey pine)	14.6	15	25	G	G	4	
63	*Pinus radiata* (Monterey pine)	16.9	15	15	G	P	3	topped
64	*Pinus radiata* (Monterey pine)	12.5	10	15	G	P	3	topped; OL
654	*Quercus agrifolia* (coast live oak)	24.2	18	30	G	G	4	
66	*Cupaniopsis anacardioides* (carrotwood)	19.8	15	15	F	F	3	CL; NS
67	*Cupaniopsis anacardioides* (carrotwood)	16.9	15	15	G	G	4	
68	*Cupaniopsis anacardioides* (carrotwood)	16.5, 14.5	15	20	F	G	3	NS
69	*Fraxinus uhdei* (shamel ash)	23.4	16	30	G	F	3	leans; OPC
70	*Fraxinus uhdei* (shamel ash)	18.5	9	25	G	P	3	TC
71	*Fraxinus uhdei* (shamel ash)	20.7	12	20	G	P	3	leans; TC
72	*Fraxinus uhdei* (shamel ash)	19.9	15	20	G	F	3	TC
73	*Fraxinus uhdei* (shamel ash)	20.0	10	20	G	P	3	TC; DBF
74	*Pinus radiata* (Monterey pine)	15.9	10	15	F	P	2	split; DC; TC
75	*Pinus radiata* (Monterey pine)	15.8	15	30	P	F	2	leans; DB; BS
76	*Pinus radiata* (Monterey pine)	23.6	10	12	G	P	3	FO
77	*Pinus radiata* (Monterey pine)	16.8	--	--	--	--	0	dead
78	*Pinus radiata* (Monterey pine)	15.3	12	20	G	G	4	
79	*Pinus radiata* (Monterey pine)	25.9	10	15	F	P	2	FO; DB; TC
80	*Pinus radiata* (Monterey pine)	15.8	12	9	F	P	2	topped; BS; OPC
81	*Pinus radiata* (Monterey pine)	8.4	12	8	G	G	4	
82	*Pinus radiata* (Monterey pine)	9.0, 8.2	10	15	F	F	3	leans; BS; CDL
83	*Washingtonia robusta* (Mexican fan palm)	18.0	5	12	G	G	4	
84	*Pinus radiata* (Monterey pine)	8.7	--	--	--	--	0	dead
85	*Pinus radiata* (Monterey pine)	33.4	20	20	P	P	2	leans; DB; BS; OL
86	*Pinus radiata* (Monterey pine)	20.8	18	25	G	F	3	leans; CDL
87	*Quercus agrifolia* (coast live oak)	6.0, 5.0, 4.1	8	15	G	G	4	
88	*Washingtonia robusta* (Mexican fan palm)	18.0	5	8	G	G	4	
89	*Pinus radiata* (Monterey pine)	18.6	15	20	F	P	2	leans; DB; ESR
90	*Pinus radiata* (Monterey pine)	15.8	12	20	F	F	2	leans; DB; BS
91	*Pinus radiata* (Monterey pine)	20.2	15	30	GF	G	3	DB

Tag #	Species	DBH (in.)	Dripline (ft.)	Height (ft.)	Health[1]	Struct[1]	Rating[2]	Notes[3]
92	*Quercus agrifolia* (coast live oak)	6.0, 3.0(x5)	6	10	G	G	4	

[1]G=Good; F=Fair; P=Poor

[2]2=declining – may die within 5 years; 3=fair – health or structural issues but likely to survive more than 5 years; 4=good; 5=excellent

[3]BS=bleeding sap; CDL=co-dominant leaders; CL=crossing limbs; DB=dieback; DBF=decayed branch failures; DC=decayed cavities; ESR=exposed structural roots; FO=fallen over; NS=nutrient stress; OL=overloaded limbs; OPC=old pruning cuts; TC=topping cuts

Attachment C

Assessment Criteria

The following tables provide summaries of the criteria used for rating the health and structure of trees in the survey. Overall tree ratings were based on the individual ratings for health and structure.

Health

Health is an indication of the overall vigor and vitality of the tree expressed as a rating of Good, Fair, or Poor. Ratings for health were based on the criteria in Table D-1.

Table D-1. Criteria for Rating Tree Health

Good	**Little or no Evidence of Stress, Disease, Infestation, or Nutrient Deficiency.** Foliage (if present on deciduous species) is of average or better density, size, and color for the species; foliage in the canopy is evenly distributed; twig elongation and bud density are normal for the species; there is no evidence of dieback; there is little or no epicormic growth (water sprouts); there are not excessive numbers of galls or excessive evidence of herbivory; callusing, if present, is vigorous; bark is healthy and intact; there are no signs of senescence.
Fair	**Moderate Evidence of Stress, Disease, Infestation, or Nutrient Deficiency.** Foliage is below average density, size, or color for the species; foliage density may be lower in some parts of the canopy; twig elongation and bud density may be moderately reduced; some evidence of dieback may be present; some epicormic growth may be present; gall or herbivore load is higher than average for the species; callusing of old wounds is not well-developed; there may be evidence of small areas of infection such as bark swelling or sloughing; the tree may be over-mature or beginning to senesce.
Poor	**Abundant Evidence of Stress, Disease, Infestation, or Nutrient Deficiency.** Foliage and/or buds are sparse; leaves are reduced in size or of unhealthy color; the canopy is sparse and underdeveloped; there is widespread evidence of dieback; twig elongation is severely reduced; there is abundant epicormic growth; gall load, insect exit holes, or evidence of herbivory is severe; old wounds are not callused; there is widespread evidence of bark swelling, splitting, or sloughing in the root crown, trunk, or major limbs; the tree is senescent.

Structure

Structure is an indication of the structural stability and failure potential of the tree expressed as a rating of Good, Fair, or Poor. Ratings for structure were based on the criteria in Table D-2.

Table D-2. Criteria for Rating Tree Structure

Good	**Low Potential for Failure.** No wounds, cavities, decay, or indications of hollowness evident in the root crown, trunk, or major limbs; no exposed anchor roots or circling roots; no codominant branching or multiple trunk attachments; no crossing limbs; little or no included bark at branch attachments; no dead major limbs; no major limb failures; no overburdened limbs; no excessive or unnatural lean; proper development of trunk taper; structure is more or less symmetrical.
Fair	**Moderate Potential for Failure.** Small to moderate wounds, cavities, decay, or indications of hollowness may be present in the root crown, trunk, or major limbs; minor exposure of

	anchor roots; no circling roots; codominant trunks or multiple trunk attachments are present but included bark is absent or not well-developed; no large crossing limbs are present; small or medium-sized dead limbs may be present in the canopy; no large limb failures; limbs may be slightly overburdened; natural or only minor lean is evident with well-developed reaction wood; canopy development may be slightly to moderately asymmetrical.
Poor	**High Potential for Failure.** Significant wounds, cavities, decay, or indications of hollowness evident in the root crown, trunk, or major limbs; anchor roots are exposed or the tree has lost anchorage; circling roots are present; codominant branching or multiple trunk attachments are present; large crossing limbs are present; significant amounts of included bark are present at trunk and branch attachments; large dead limbs are present in the canopy; evidence of past large limb failures; overburdened limbs; poor trunk taper; excessive or unnatural lean or drastically unbalanced canopy development.

Appendix F

Representative Site Photos



Photo 1. View of ruderal/disturbed habitat on the project site. Taken May 13, 2020.



Photo 2. View of developed habitat on the project site. Taken May 13, 2020.



Photo 3**.** Trees bordering the eastern edge of the project site. Taken May 13, 2020.



Photo 4**.** Photo of the western portion of the project site showing vehicles and equipment/supplies associated with active remediation activity. Taken April 26, 2021.



Photo 5**.** Photo of trees located in the center of the project site. Taken April 26, 2021.



Photo 5**.** Photo of Seasonal Wetland C, in the western portion of the project site. Taken April 26, 2021.



Photo 5. Photo of California ground squirrel burrows in the project site. Taken April 26, 2021.



Photo 5. Photo of recently remediated area in western portion of the project site. Taken April 26, 2021.

Appendix G

Salt Marsh Harvest Mouse Habitat Assessment

2246 Camino Ramon
San Ramon, CA 94583
Phone: (925) 789-7459

Stephen Stringer
11 Natoma Street
Suite 155
Folsom, CA 95630

June 9, 2020

SUBJECT: FMC Willow Property, Newark, California: Habitat Assessment for Salt Marsh Harvest Mouse

Dear Mr. Stringer,

Per your request, Dr. Gretchen Padgett-Flohr, a 10(a)(1)(A) Salt Marsh Harvest Mouse-permitted mammalogist (PRT # TE006112-8) conducted a habitat assessment for Salt Marsh Harvest Mouse (*Reithrodontomys raviventris*) on Tuesday, May 1st, 2018, at the property known FMC Willow (Project Site) located in the City of Newark, Alameda County, California. This report summarizes the results of the habitat assessment for the Property.

PROPERTY DESCRIPTION

FMC Willow Project Site is located at the terminus of Enterprise Drive in Newark (Figure 1), California. The Property is located in the southwestern portion of the San Francisco Bay in the City of Newark, California and is within the Dumbarton Transit Oriented Development Specific Plan Area, which is comprised of former industrial parcels planned for future transit-oriented development. The project site is a former industrial chemical plant that was active until the 1990s. Following ongoing soil remediation activities, the site is barren except for some remnant cement pads and cement and asphalt roads.

At the time of the biological reconnaissance survey on June 3, 2020, remediation was ongoing in the western portion of the site. The Project Site is located within a former industrial area that is rapidly being converted to mixed residential uses. The project site is bound on the north by the San Mateo Transit District (SamTrans) railroad corridor and industrial development beyond, to the east by a vacant parcel planned for development, and to the south and west by residential and mixed-use development currently under construction.

The Project Site contains no natural biological communities. Following extensive soil remediation that included the export of contaminated soils and import of clean fill, the majority of the site is disturbed, but is vegetated by weedy species typical of the region. Soil remediation is on-going in the western portion of the site. Currently, the Project Site supports three vegetation communities/land covers: ruderal/disturbed, developed and seasonal wetland.

Seasonal wetlands in the Project Site occur within constructed ditches and depressions formed as a result of former construction activity that hold water for sufficient duration to form wetland conditions. The seasonal wetlands contain facultative (FAC) and facultative wetland (FACW) hydrophytic species such as salt grass (*Distichlis spicata*) and rabbit's foot grass (*Polypogon monspeliensis*).

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SPECIES OF INTEREST

Salt Marsh Harvest Mouse (*Reithrodontomys raviventris*)



Salt Marsh Harvest Mouse (SMHM) is a federal- and state-listed endangered species endemic to the salt and brackish marshes of the San Francisco Bay and the Napa, Petaluma, San Pablo, and Suisun Bay salt marshes. Current literature suggests that SMHM evolved in the San Francisco Bay Area from parental stock of harvest mice approximately 25,000 years ago (Nelson *et al*. 1984).

Harvest mice (*Reithrodontomys* spp.) in general, are small, delicate mice with nearly nude tails and the genus is easily identified by the distinctive pronounced groove on the upper incisors (Jameson and Peters 1986), which other small rodent genera [e.g. house mouse (*Mus musculus*)] do not exhibit. SMHM measure approximately 118 to 175 mm in total (adult) length and display a venter that varies from white to red throughout the range of the species (Fisler 1965). The average lifespan in the wild is approximately one year, although SMHM have been known to live for up to three years under laboratory conditions (Fisler 1965).

The federal and state listing of *Reithrodontomys raviventris* includes two subspecies: *Reithrodontomys raviventris raviventris* (the southern subspecies) and *Reithrodontomys raviventris halicoetes* (the northern subspecies). *R*. *r*. *halicoetes* is found in Marin County, and throughout the Petaluma, Napa, and Suisun Bay marshes. The North Bay marshes inhabited by this subspecies experience a higher variation in salinity levels, but have a lower average salinity than that found in the South San Francisco Bay. The North Bay has experienced an increase in salinity with a corresponding increase in halophytic vegetation [e.g. pickleweed (*Salicornia* [= *Sarcocornia*] *virginica*) over the last 150 years, due to diking and filling of the marshes and reduced river flows into the Delta from upstream dams and water diversions of the San Joaquin and Sacramento Rivers.

Evolving under slightly different environmental conditions than its southern counterpart, *R*. *r*. *halicoetes* exhibits slightly different characteristics and is genetically distinct from the disjunct southern subspecies (Fisler 1965). Two important behavioral and physiological differences between the two subspecies are that *R*. *r*. *halicoetes* has the ability to drink seawater, but does not have the ability to become torpid. In addition to these behavioral and physiological differences, *R*. *r*. *halicoetes* does not have the red belly that gave the southern subspecies its name. The northern subspecies generally has a white-gray/white venter, with some clinal variation and is therefore much more challenging to differentiate from the sympatric western harvest mouse (*R*. *megalotis*). In general, the North Bay subspecies has a tail-to-body ratio that is greater than 100 percent, although there is a certain amount of variation in this particular trait. The Collinsville population of SMHM is

the most extreme case, exhibiting a tail-to-body ratio in the 115 to 130 percent range in one study conducted in the area (G. Padgett-Flohr, unpub. data).

In contrast, the South Bay, where the southern subspecies (*R*. *r*. *raviventris*) is found, has little variation in salinity, but the average salinity level is much higher than that in the North Bay. *R*. *r*. *raviventris* does not drink sea water, but it does possess the ability to enter a state of torpor (Fisler 1965). The southern subspecies was named for its distinctive red belly, although this characteristic can show variation and is consistent only in the Alviso area of the southernmost part of the Bay. Tail-to-body ratios of the southern subspecies tend to fall under 100 percent, although this measurement can have large variation and is not considered to be a diagnostic characteristic.

Past studies have shown that optimal habitat for SMHM is a thick cover of pickleweed complexly interwoven with other halophytic plants such as fat hen (*Atriplex patula*), and alkali heath (*Frankenia grandifolia*) (Shellhammer et al. 1982; Shellhammer 1984; and Johnson et al. 1984). In diked marshes particularly, SMHM are highly dependent on plant cover. In addition to vegetation density, the salinity level in pickleweed is also an important component of the microhabitat and mid-range levels of salinity in pickleweed has been shown to be correlated with the presence of SMHM in diked marshes (Padgett-Flohr and Isakson 2003). SMHM were found to be absent from sites with low salinities, and infrequent in areas where pickleweed was high in salinity (Padgett-Flohr and Isakson 2003). Pickleweed height was formerly considered to be a key habitat requirement of SMHM; however, during her study conducted at New Chicago Marsh in 1996, Dr. Padgett-Flohr tested this variable using a random sampling scheme and found that this correlation was not supported (Padgett-Flohr SJSU Senior Thesis 1996). There was no significant association between SMHM and pickleweed height. Geissel et al. (1988) found that the height of a pickleweed plant is inversely correlated to the salinity level within the plant, meaning that the more saline the plant the shorter the plant. As Padgett-Flohr and Isakson demonstrated (2003), SMHM presence is statistically correlated with pickleweed containing a mid-range level of salinity (500 to 699 mmol/kg Cl^-). Mid-range levels of salinity can typically only be achieved by regular tidal influence. Diked marshes lacking tidal influence become either freshwater or hypersaline (Zedler and Adam 2002; Gedan et al. 2009) and do not provide the salinity levels that SMHM need or can tolerate.

SMHM therefore, require habitat that is dominated by dense, contiguous stands of halophytic vegetation that retains a mid-range level of salinity. Recurrent, but shallow flooding by saline water is likely needed to maintain habitat conditions that favor SMHM (Padgett-Flohr and Isakson 2003; USFWS 2013).

METHODS

Background and Research

The California Natural Diversity Database (CNDDB) was queried to identify all documented occurrences of SMHM within 5 miles of the Property over the last 30 years.

Field Visit

Dr. Padgett-Flohr conducted a site visit and habitat assessment of the Property on May 1st, 2018. The entire site was surveyed on foot and assessed for potential suitability for SMHM.

RESULTS

Background and Research

The CNDDB documents 20 geographic occurrences of SMHM within 5 miles of the Project Site. One occurrence record reports 34 SMHM captured in 1989 at the Mayhews Landing site east of the junction of Jarvis Road and Thornton Avenue in Newark which is located 0.44 mile from the Project Site. In 2001, 36 SMHM were reported captured during studies at Don Edwards National Wildlife Refuge south of Highway 84. Eighteen additional occurrences, are reported from 1971 and 1991 ranging from 1.45 to 4.96 miles from the Project Site as shown in Figure 2. These 18 occurrences represent multiple individual SMHM as each reported occurrence was the result of SMHM trapping surveys. Captures at each geographic location where occurrences were reported ranged between 1 and 36 SMHM captured.

Field Visit

The majority of the Project Site is highly altered and is dominated by non-native grasses (Attachment A, Photographs 1 through 4) reflecting its past historical anthropogenic disturbances from industrial use. There is no pickleweed present on the site. There is no potential for SMHM to occur on the Property.

CONCLUSION

There is no potential for SMHM to occur on the Project Site due to the lack of suitable habitat. The construction of this Project will not impact the species in any way.

Sincerely,

Gretchen Padgett-Flohr

Dr. Gretchen Padgett-Flohr

(925) 789-7459



Figure 1: FMC Willow Property
Newark, California

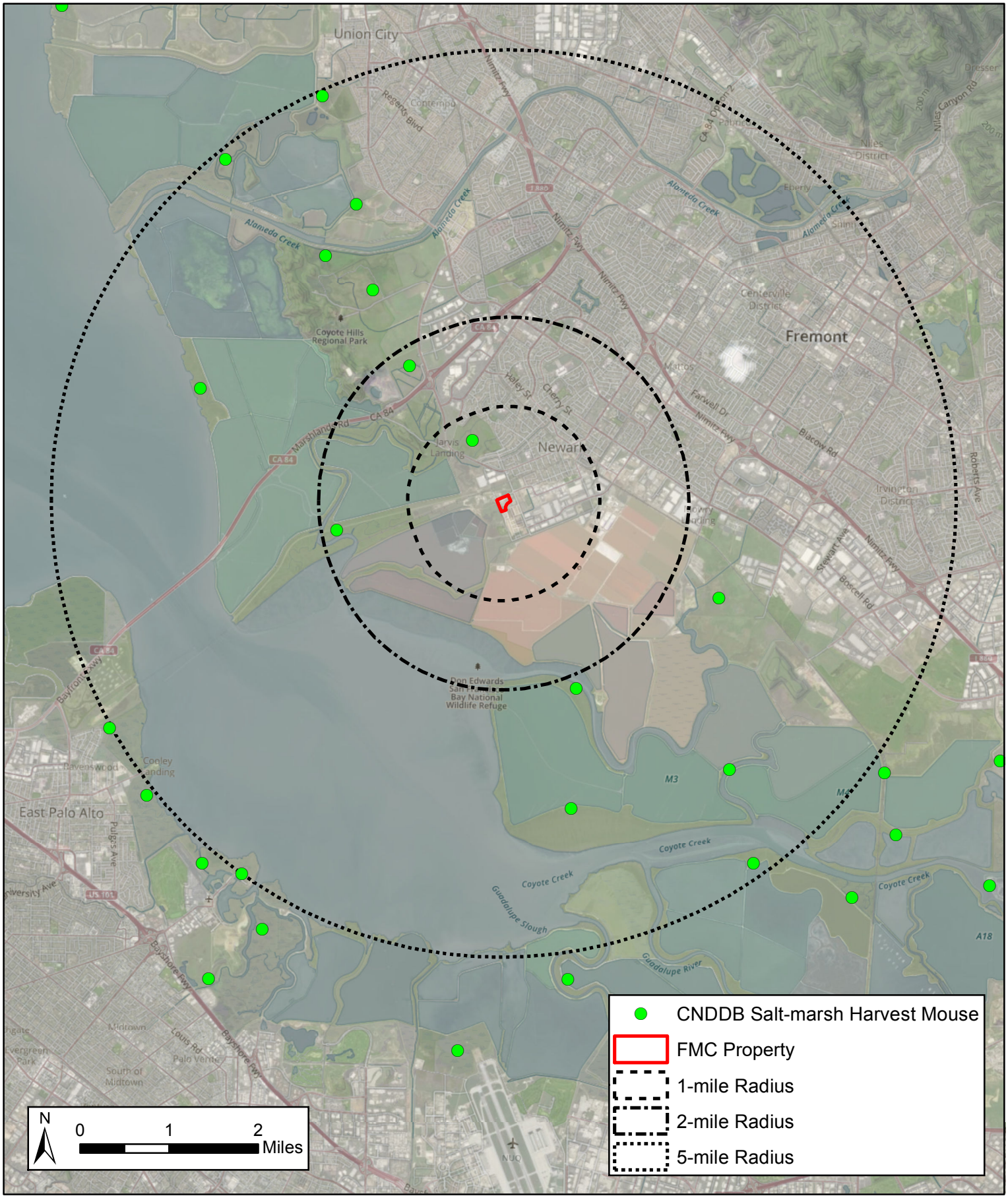


Figure 2: CNDDB Salt-marsh Harvest Mouse Occurrences within 5-miles of FMC Willow Property Newark, California

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Attachment A: Representative Photographs

Representative Photographs



Photograph 1:

The Property is dominated by ruderal vegetation.

June 2020



Photograph 2:

Wetlands in Hetch Hetchy Row.

June 2020

Photographs Continued



Photograph 3:

Soil remediation is on-going in the western portion of the site.

June 2020



Photograph 4:

Wetland along southwestern portion of the Property.

June 2020.

Appendix D

Cultural Resources Assessment for the FMC Willow and Grand Park Project

FMC Willow and Grand Park Project

Cultural Resources Assessment

Prepared for:

City of Newark
Community Development Department
37101 Newark Boulevard
Newark, CA 94560

Prepared by:

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95630

December 2021

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TABLE OF CONTENTS

Section			Page
1.0	PROJECT BACKGROUND		1
	1.1	Introduction	1
	1.2	Project Description	1
		1.2.1 Project Location	1
		1.2.2 Project Setting	1
		1.2.3 Proposed Project	2
	1.3	Area of Potential Effects	3
2.0	REGULATORY FRAMEWORK		3
	2.1	California Environmental Quality Act	3
	2.2	California Register of Historical Resources	3
	2.3	Native American Heritage Commission	4
	2.4	Government Code Sections 6254(r) and 6254.10	4
	2.5	Health and Safety Code, Sections 7050 and 7052	5
	2.6	Penal Code, Section 622.5	5
	2.7	Newark General Plan	5
3.0	CULTURAL SETTING		5
	3.1	Prehistoric Background	6
	3.2	Ethnographic Background	8
	3.3	Historic Background	9
	3.4	City of Newark	10
		3.4.1 History of the Project Area	11
4.0	RECORD SEARCHES		12
	4.1	Northwest Information Center Record Search	12
		4.1.1 Previous Studies	13
		4.1.2 Previously Documented Resources	15
	4.2	Native American Heritage Commission Sacred Lands File Search	15
5.0	PEDESTRIAN SURVEY		16
	5.1	FMC Willow Area of Potential Effects	16
	5.2	Grand Park Area of Potential Effects	17
6.0	SUMMARY AND RECOMMENDATIONS		17
	6.1	Summary	17
	6.2	Recommendations	18
		6.2.1 Accidental Discovery of Cultural Resources	18
		6.2.2 Accidental Discovery of Human Remains	18
7.0	REFERENCES		20

LIST OF APPENDICES

A Figures
B Native American Correspondence
C Photographs

LIST OF TABLES

No. Title **Page**

Table 1. Previous Studies Conducted Within the Study Area 13
Table 2. Previously Documented Resources within the Study Area 15

MANAGEMENT SUMMARY

HELIX Environmental Planning, Inc. (HELIX), under contract to The Willow Project Owner, LLC, has prepared this Cultural Resources Assessment to determine whether historical resources may be affected by implementation of the FMC Willow and Grand Park Project in the City of Newark, Alameda County, California. The project will create ground disturbances that would have the potential to affect historic properties if they exist within the proposed project area. This assessment is based on the results of an archival records search, Native American coordination, and an intensive pedestrian survey of the project area. The proposed project would redevelop the 22.1-acre area into a 370-unit multi-family community including a mixed-use area of 4,000 square feet (sf) of retail and 90 affordable units (plus 1 manager unit), a 5-acre community park (Grand Park), and a 1,485-sf community building, along with approximately 1.8 acres set aside for a future transit station (including 0.1 acre of area for water quality management and 0.6 acre for public roads). The project would also provide a 20-foot-wide trail corridor, containing a 12-foot-wide multi-purpose trail, that would transect the Grand Park and run along Enterprise Drive to Willow Street and is anticipated to be eligible to be part of the regional San Francisco Bay Trail.

Results from the record search indicate that no resources have been previously recorded within the project's Areas of Potential Effect (APE), although tracks associated with the historic Dumbarton Cutoff portion of the Southern Pacific Railroad are located adjacent to the APE. The Native American Heritage Commission (NAHC) conducted a search of their Sacred Lands File for the presence of Native American sacred sites or human remains in the vicinity of the APE. The search failed to indicate the presence of Native American cultural resources in the APE. The proposed project includes General Plan and Specific Plan amendments, and formal invitations to participate in the Senate Bill (SB) 18 consultation process on the proposed project were sent by the City to the same six tribal representatives. Each tribe was provided a brief description of the project and its location, the contact information for the City's authorized representative, and a notification that the tribe has been invited to consult with the City on this project in accordance with Government Code Section 65352.3. As of December 2021, no tribe has responded requesting consultation under SB 18.

The entire 22.1-acre project APE (consisting of the 17.1-acre FMC Willow APE and the 5-acre Grand Park APE) was fully surveyed for archaeological resources. The entire APE is flat, and its eastern portion is almost entirely overgrown with grass. The FMC Willow APE is also bisected from east to west by the Hetch Hetchy pipeline ROW, a 100-foot-wide corridor that has been excluded from the project and is not part of the APE. The Grand Park APE is almost completely covered in the remains of concrete industrial pads and asphalt access roads and includes areas that are currently used for staging construction equipment and materials. No prehistoric or historic resources were found during the surveys.

The results of this assessment indicate there would be no impacts to significant cultural resources of prehistoric or historic age by the FMC Willow and Grand Park Project, and therefore no additional studies, archaeological work, or construction monitoring are recommended. However, HELIX recommends that procedures be in place to address unanticipated discoveries of cultural materials and human remains during construction.

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1.0 PROJECT BACKGROUND

1.1 INTRODUCTION

This report presents the results of a cultural resources assessment conducted by HELIX Environmental Planning, Inc. (HELIX) for the proposed development of a 370-unit multi-family community and mixed-use area (proposed project) on an approximately 22.1-acre area in the City of Newark, Alameda County, California. Development of this project is proposed by The Willow Project Owner, LLC for property within the Dumbarton Transit Oriented Development (TOD) Specific Plan.

Cultural resources investigations conducted in support of this project are subject to provisions of the California Environmental Quality Act (CEQA), as defined by Section 15064.5 of the CEQA Guidelines, with the City of Newark Community Development Department (City) acting as the Lead Agency. This report documents HELIX's efforts to assess the potential of ground disturbances associated with this project to impact cultural resources that meet the criteria of significance under CEQA. This assessment is based on the results of an archival records search, Native American outreach, and an intensive pedestrian survey of the proposed project area.

1.2 PROJECT DESCRIPTION

1.2.1 Project Location

The proposed project area is located within the City of Newark in southwestern Alameda County, northwest of the intersection of Willow Street and Enterprise Drive (Figure 1; figures can be found within Appendix A). The majority of the proposed project area is located in Sections 2 and 11 of Township 5 South and Range 2 West as shown on the U.S. Geological Survey (USGS) 7.5-minute "Newark" quadrangle map (Figure 2). The western portion of the area has not been sectioned. The proposed project would be located on Assessor's Parcel Number (APN) 092-0100-013, 092-0100-014, 537-0852-028, 537-0852-029, 537-0852-030, and 537-0852-031.

1.2.2 Project Setting

The project area is a former industrial chemical plant that was active until the 1990s. Subject to years of soil remediation activities, the area is barren except for remnant cement pads and cement and asphalt roads. The project area is bordered by the SamTrans railroad corridor to the north, residential development to the west, Enterprise Drive and planned mixed use developments to the south, and Willow Street to the east. The Hetch Hetchy pipeline right-of-way (ROW), owned and operated by the City and County of San Francisco Public Utility Commission (SFPUC), transects the project area. Part of the Don Edwards San Francisco Bay National Wildlife Refuge is approximately 1,000 feet northwest of the project area, on the other side of the existing SamTrans railroad tracks. The surrounding land uses are characterized by existing and former industrial parcels, railroad, and residential and mixed-use development.

Terrain in the project area and surrounding area has been altered by industrial development, and most existing topographic relief is the result of fill for the railroad and industrial pads, excavation of artificial basins and channels, and diking of tidelands. The project area currently consists of leveled industrial pads, asphalt roads, and railroad embankments. Terrain in the area surrounding the project area is essentially flat. Elevations on the project area are between 9 feet and 12 feet above mean sea level from west to east.

1.2.3 Proposed Project

The proposed project would redevelop the 22.1-acre area into a 370-unit multi-family community including a mixed-use area of 4,000 square feet (sf) of retail and 90 affordable units (plus 1 manager unit), a 5-acre community park (Grand Park), and a 1,485-sf community building, along with approximately 1.8 acres set aside for a future transit station (including 0.1 acre of area for water quality management and 0.6 acre for public roads). The project would also provide a 20-foot-wide trail corridor, containing a 12-foot-wide multi-purpose trail, that would transect the Grand Park and run along Enterprise Drive to Willow Street and is anticipated to be eligible to be part of the regional San Francisco Bay Trail.

The proposed Grand Park would be located in the western portion of the project area and would extend from Enterprise Drive to the south to the SamTrans railroad corridor to the north. The park would include a variety of amenities, including walking paths and a connection to the regional San Francisco Bay Trail, a sports field, small and large dog parks, multiple play areas for children of different age groups, a restroom and drinking fountains, a gazebo, a seating area for weddings, wildflower gardens and retention basins, lawn games, and a variety of other seating areas. A park access road with designated parking spaces and a vehicle turnaround runs roughly north/south through most of the park.

The Hetch Hetchy ROW is a 100-foot-wide corridor that transects the project area. Approximately 7 acres of the project area lies north of the Hetch Hetchy ROW, and approximately 15 acres of the project area lies south of the Hetch Hetchy ROW.

Additional proposed site improvements include the following: on- and off-street parking, open space and common areas, drive aisles, underground utilities, Low Impact Development (LID) drainage and water quality treatment structures, lighting, sidewalks, and landscaping.

1.2.3.1 Grading

The entire 22.1-acre project area would be disturbed during site preparation and grading. In preparing the area for construction, approximately 42,000 sf of concrete and 296,000 sf of asphalt remaining on the project area would be demolished and removed. Any remaining debris and vegetation within the area to be disturbed would be cleared, and the area would be graded. Site grading and preparation would require approximately 22,100 cubic yards of cut, and approximately 99,800 cubic yards of fill. Therefore, approximately 77,700 cubic yards of clean soil would be imported to attain the minimum elevation for lots required by the City of Newark.

1.3 AREA OF POTENTIAL EFFECTS

The Area of Potential Effects (APE) for the proposed project is defined as the geographic area where project activities may directly or indirectly cause changes in the character or use of historical resources (i.e., cultural resources that meet the criteria of significance under CEQA) of prehistoric or historic age, if any such resources exist. The 22.1-acre overall APE for the proposed project, which consists of the 17.1-acre FMC Willow APE and the 5-acre Grand Park APE, corresponds to the 22.1-acre project area and would be entirely disturbed by site preparation and grading. The APE is shown on an aerial overview map (Figure 3).

2.0 REGULATORY FRAMEWORK

2.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to CEQA, an historical resource is a resource listed in, or eligible for listing in, the California Register of Historical Resources (CRHR). In addition, resources included in a local register of historic resources, or identified as significant in a local survey conducted in accordance with state guidelines, are also considered historic resources under CEQA, unless a preponderance of the facts demonstrates otherwise. According to CEQA, the fact that a resource is not listed in, or determined eligible for listing in, the CRHR, or is not included in a local register or survey, shall not preclude a Lead Agency, as defined by CEQA, from determining that the resource may be an historic resource as defined in California Public Resources Code (PRC) Section 5024.1.7.

CEQA applies to archaeological resources when (1) the archaeological resource satisfies the definition of an historical resource, or (2) the archaeological resource satisfies the definition of a "unique archaeological resource." A unique archaeological resource is an archaeological artifact, object, or site that has a high probability of meeting any of the following criteria (PRC Section 21083.2(g)):

1. The archaeological resource contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information.
2. The archaeological resource has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. The archaeological resource is directly associated with a scientifically-recognized important prehistoric or historic event or person.

2.2 CALIFORNIA REGISTER OF HISTORICAL RESOURCES

Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1(a)). Certain properties, including those listed in or formally determined eligible for listing in the National Register of Historic Places (NRHP) and California Historical Landmarks (CHLs) numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historic

resources surveys, or designated by local landmarks programs may be nominated for inclusion in the CRHR.

A resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria (PRC Section 5024.1(c)):

1) It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2) It is associated with the lives of persons important in our past.
3) It embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values.
4) It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to be recognizable as historic resources and to convey the reasons for their significance. It is possible that a resource whose integrity does not satisfy NRHP criteria may still be eligible for listing in the CRHR. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if, under Criterion 4, it maintains the potential to yield significant scientific or historical information or specific data. Resources that have achieved significance within the past 50 years also may be eligible for inclusion in the CRHR, provided that enough time has lapsed to obtain a scholarly perspective on the events or individuals associated with the resource.

2.3 NATIVE AMERICAN HERITAGE COMMISSION

PRC Section 5097.91 established the Native American Heritage Commission (NAHC), whose duties include the inventory of places of religious or social significance to Native Americans and the identification of known graves and cemeteries of Native Americans on private lands. Under PRC Section 5097.9, a State policy of noninterference with the free expression or exercise of Native American religion was articulated along with a prohibition of severe or irreparable damage to Native American sanctified cemeteries, places of worship, religious or ceremonial sites, or sacred shrines located on public property. Section PRC Section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

2.4 GOVERNMENT CODE SECTIONS 6254(R) AND 6254.10

These sections of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the Native American Heritage Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency."

2.5 HEALTH AND SAFETY CODE, SECTIONS 7050 AND 7052

Health and Safety Code, Section 7050.5 declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

2.6 PENAL CODE, SECTION 622.5

Section 622.5 of the Penal Code provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands, but specifically excludes the landowner.

2.7 NEWARK GENERAL PLAN

Goal LU-5 of the Newark General Plan is to identify, preserve, and maintain historic structures and sites to enhance Newark's sense of place and create living reminders of the city's heritage. The following policies and actions are relevant to the types of cultural resources that may be found in the project site:

Policy LU-55, Native American Resources: Coordinate with local tribal representatives and the Native American Heritage Commission to ensure the protection of Newark's Native American resources and to follow appropriate mitigation, preservation, and recovery procedures in the event that important resources are identified during development.

Action LU-5.D, Historic Inventory: Maintain and periodically update a list of Newark's historic sites and structures.

Action LU-5.E, State and Federal Register Listings: Work with property owners seeking to place their properties on the National Register of Historic Places, the California Points of Historical Interest, California Historical Landmarks, or the California Register of Historical Resources.

3.0 CULTURAL SETTING

Following is a brief overview of the prehistoric, ethnographic, and historic backgrounds that provide a context in which to understand the relevance of sites found in and around the APE. This section is not intended to be a comprehensive review of the current resources available; rather, it serves as a general overview.

Further details can be found in ethnographic studies, mission records, and major published sources, including Beardsley (1948), Bennyhoff (1950), Fredrickson (1973 and 1974), Kroeber (1925), Chartkoff and Chartkoff (1984), and Moratto (1984).

3.1 PREHISTORIC BACKGROUND

The San Francisco Bay Area supported a dense population of hunter-gatherers over thousands of years, leaving a rich and varied archaeological record. The Bay Area was a place of incredible language diversity, with seven languages spoken at the time of Spanish settlement in 1776. The diverse ecosystem of the Bay and surrounding lands supported an average of three to five persons per square mile but reached eleven persons per square mile in the North Bay (Milliken 1995). At the time of Spanish contact, the Native Americans living in the Bay Area were organized into local tribelets that defended fixed territories under independent leaders. Typically, individual Bay Area tribelets included 200 to 400 people distributed among three to five semi-permanent villages, within territories measuring approximately 10 to 12 miles in diameter (Milliken 1995).

Early archaeological investigations in central California were conducted at sites located in the Sacramento-San Joaquin Delta region. The first published account documents investigations in the Lodi and Stockton area (Schenck and Dawson 1929). The initial archaeological reports typically contained descriptive narratives, with more systematic approaches sponsored by Sacramento Junior College in the 1930s. At the same time, University of California at Berkeley excavated several sites in the lower Sacramento Valley and Delta region, which resulted in recognizing archaeological site patterns based on variations of inter-site assemblages. Research during the 1930s identified temporal periods in central California prehistory and provided an initial chronological sequence (Lillard and Purves 1936; Lillard, et. al. 1939). In 1939, Lillard noted that each cultural period led directly to the next and that influences spread from the Delta region to other regions in central California (Lillard, et al. 1939). In the late 1940s and early 1950s, Beardsley documented similarities in artifacts among sites in the San Francisco Bay region and the Delta and refined his findings into a cultural model that ultimately became known as the Central California Taxonomic System (CCTS). This system proposed a uniform, linear sequence of cultural succession (Beardsley 1948 and 1954). The CCTS system was challenged by Gerow, whose work looked at radiocarbon dating to show that Early and Middle Horizon sites were not subsequent developments but, at least partially, contemporaneous (1954; 1974; Gerow with Force 1968).

To address some of the flaws in the CCTS system, Fredrickson (1973) introduced a revision that incorporated a system of spatial and cultural integrative units. Fredrickson separated cultural, temporal, and spatial units from each other and assigned them to six chronological periods: Paleo-Indian (10000 to 6000 B.C.); Lower, Middle and Upper Archaic (6000 B.C. to A.D. 500), and Emergent (Upper and Lower,

A.D. 500 to 1800). The suggested temporal ranges are similar to earlier horizons, which are broad cultural units that can be arranged in a temporal sequence (Moratto 1984). In addition, Fredrickson defined several patterns—a general way of life shared within a specific geographical region. These patterns include:

- Windmiller Pattern or Early Horizon (3000 to 1000 B.C.);
- Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500); and,
- Augustine Pattern or Late Horizon (A.D. 500 to historic period).

Brief descriptions of these temporal ranges and their unique characteristics follow.

Windmiller Pattern or Early Horizon (3000 to 1000 B.C.)

Characterized by the Windmiller Pattern, the Early Horizon was centered in the Cosumnes district of the Delta and emphasized hunting rather than gathering, as evidenced by the abundance of projectile points in relation to plant processing tools. Additionally, atlatl, dart, and spear technologies typically included stemmed projectile points of slate and chert but minimal obsidian. The large variety of projectile point types and faunal remains suggests exploitation of numerous types of terrestrial and aquatic species (Bennyhoff 1950; Ragir 1972). Burials occurred in cemeteries and intra-village graves. These burials typically were ventrally extended, although some dorsal extensions are known with a westerly orientation and a high number of grave goods. Trade networks focused on acquisition of ornamental and ceremonial objects in finished form rather than on raw material. The presence of artifacts made of exotic materials such as quartz, obsidian, and shell indicate an extensive trade network that may represent the arrival of Utian populations into central California. Also indicative of this period are rectangular Haliotis and Olivella shell beads, and charmstones that usually were perforated.

Berkeley Pattern or Middle Horizon (1000 B.C. to A.D. 500)

The Middle Horizon is characterized by the Berkeley Pattern, which displays considerable changes from the Early Horizon. This period exhibited a strong milling technology represented by minimally shaped cobble mortars and pestles, although metates and manos were still used. Dart and atlatl technologies during this period were characterized by non-stemmed projectile points made primarily of obsidian. Fredrickson (1973) suggests that the Berkeley Pattern marked the eastward expansion of Miwok groups from the San Francisco Bay Area. Compared with the Early Horizon, there is a higher proportion of grinding implements at this time, implying an emphasis on plant resources rather than on hunting. Typical burials occurred within the village with flexed positions, variable cardinal orientation, and some cremations. As noted by Lillard, the practice of spreading ground ochre over the burial was common at this time (Lillard, et al. 1939). Grave goods during this period are generally sparse and typically include only utilitarian items and a few ornamental objects. However, objects such as charmstones, quartz crystals, and bone whistles were occasionally present, which suggests the religious or ceremonial significance of the individual (Hughes 1989). During this period, larger populations are suggested by the number and depth of sites compared with the Windmiller Pattern. According to Fredrickson (1973), the Berkeley Pattern reflects gradual expansion or assimilation of different populations rather than sudden population replacement and a gradual shift in economic emphasis.

Augustine Pattern or Late Horizon (A.D. 500 to Historic Period)

The Late Horizon is characterized by the Augustine Pattern, which represents a shift in the general subsistence pattern. Changes include the introduction of bow and arrow technology; and most importantly, acorns became the predominant food resource. Trade systems expanded to include raw resources as well as finished products. There are more baked clay artifacts and extensive use of Haliotis ornaments of many elaborate shapes and forms. Burial patterns retained the use of flexed burials with variable orientation, but there was a reduction in the use of ochre and widespread evidence of cremation (Moratto 1984). Judging from the number and types of grave goods associated with the two types of burials, cremation seems to have been reserved for individuals of higher status, whereas other individuals were buried in flexed positions. Johnson (1976) suggests that the Augustine Pattern

represents expansion of the Wintuan population from the north, which resulted in combining new traits with those established during the Berkeley Pattern.

Central California research has expanded from an emphasis on defining chronological and cultural units to a more comprehensive look at settlement and subsistence systems. This shift is illustrated by the early use of burials to identify mortuary assemblages and more recent research using osteological data to determine the health of prehistoric populations (Dickel et al. 1984). Although debate continues over a single model or sequence for central California, the general framework consisting of three temporal/cultural units is generally accepted, although the identification of regional and local variation is a major goal of current archaeological research.

3.2 ETHNOGRAPHIC BACKGROUND

At the time of European contact, the general Newark area was occupied by various tribelets that were part of the Ohlone (previously Costanoan) tribe of California Native Americans (Levy 1978). The Ohlone group designates a language family consisting of eight branches of the Ohlone language that are considered too distinct to be dialects, with each being related to its geographically adjacent neighbors. These groups lived in approximately 50 separate and politically autonomous tribelet areas, each with one or more permanent villages, between the North San Francisco Bay and the lower Salinas River (Levy 1978).

The various Ohlone tribes subsisted as hunter-gatherers and relied on local terrestrial and marine flora and fauna for subsistence (Levy 1978). The predominant plant food source was the acorn, but they also exploited a wide range of other plants, including various seeds, buckeye, berries, and roots. Protein sources included grizzly bear, elk, sea lions, antelope, and black-tailed deer as well as smaller mammals such as raccoon, brush rabbit, ground squirrels, and wood rats. Waterfowl, including Canadian geese, mallards, green-winged teal, and American widgeon, were captured in nets using decoys to attract them. Fish also played an important role in the Ohlone diet and included steelhead, salmon, and sturgeon (Jones 2007).

The Ohlone constructed watercraft from tule reeds and possessed bow and arrow technology. They fashioned blankets from sea otter pelts, fabricated basketry from twined reeds of various types, and assembled a variety of stone and bone tools in their assemblages. Ohlone villages typically consisted of domed dwelling structures, communal sweathouses, dance enclosures, and assembly houses constructed from thatched tule reeds and a combination of wild grasses, wild alfalfa, and ferns.

The Ohlone were politically organized into autonomous tribelets that had distinct cultural territories. Individual tribelets contained one or more villages with several seasonal camps for resource procurement within the tribelet territory. The tribelet chief could be either male or female, and the position was inherited patrilineally, but approval of the community was required. The tribelet chief and council were essentially advisors to the community and were responsible for feeding visitors, directing hunting and fishing expeditions, ceremonial activities, and warfare on neighboring tribelets.

The Gold Rush brought disease to the native inhabitants, and by the 1850s, nearly all the Ohlone had adapted in some way or another to economies based on cash income. Hunting and gathering activities continued to decline and were rapidly replaced with economies based on ranching and farming.

3.3 HISTORIC BACKGROUND

The history of the San Francisco Bay Area can be divided into several periods of influence; pertinent historic periods are briefly summarized below.

Spanish Mission Period

The most drastic and permanent change came to the local Ohlone way of life with the establishment of the Spanish Mission system. By the early 1800s, the mission fathers began a process of cultural change that brought the majority of local Native Americans into the missions. At the expense of traditional skills, the neophytes were taught the pastoral and horticultural skills of the Hispanic tradition. If the Native Americans tried to escape, the Spanish missionaries traveled into valley regions to recapture them and recruit inland Native Americans for the coastal missions. In 1834, the Mission system was officially secularized, and most of the mission Native American population dispersed to local ranches, villages, or nearby pueblos. Following the collapse of the mission system, many of the local Native Americans returned to northern California, bringing with them language and agricultural practices learned from the Spanish. During the latter half of the 19th century, the size of all Native American populations dwindled dramatically, due to the spread of European settlements and the diseases the Europeans brought with them (Mission San Jose 2020).

Mexican Period

With the declaration of Mexican independence in 1821, Spanish control of Alta California ended, although little change occurred. Political change did not take place until mission secularization in 1834, when Native Americans were released from missionary control and the mission lands were granted to private individuals. Shoup and Milliken (1999) state that mission secularization removed the social protection and support on which Native Americans had come to rely. It exposed them to further exploitation by outside interests, often forcing them into a marginal existence as laborers for large ranchos. Following mission secularization, the Mexican population grew as the native population continued to decline. Anglo-American settlers began to arrive in Alta California during this period and often married into Mexican families, becoming Mexican citizens, which made them eligible to receive land grants. In 1846, on the eve of the U.S.-Mexican War (1846 to 1848), the estimated population of Alta California was 8,000 non-natives and 10,000 natives. However, these estimates have been debated. Cook (1976) suggests the Native American population was 100,000 in 1850; the U.S. Census of 1880 reports the Native American population as 20,300.

European Expansion

In 1848, as a result of the Treaty of Guadalupe Hidalgo, California became a United States territory. Also in 1848, John Marshall found gold at Sutter's Mill in Coloma, which marked the start of the Gold Rush. The influx of miners and entrepreneurs increased the population of California, not including Native Californians, from 14,000 to 224,000 in just four years. This massive jump in population allowed California to meet the requirements to petition for statehood resulting in California becoming a state in 1850. At this point, large numbers of American businessmen, ranchers, orchardists, farmers, entrepreneurs, immigrants, religious groups, and anyone else who could make the trip by boat or overland flocked to California. Drawn by the benign climate, fertile land, access to ports for shipping and

trade, and a vast array of business opportunities, Euro-Americans flocked to California. More came each decade, establishing businesses, farms, and ranches, creating commercial and industrial ventures and buying up land from the Mexican families to subdivide and create towns and cities. Cities such as San Francisco and Sacramento benefited greatly from the newcomers and the business developments, becoming more diverse and economically successful with each decade.

3.4 CITY OF NEWARK

The city of Newark is located within Alameda County, California and comprised of approximately 14 square miles of land. Newark was incorporated on September 22, 1955 and is part of what is referred to as the "Tri-City" area which includes Newark, Fremont and Union City. In 2015, the city's population was approximately 44,000 people. The development of Newark followed the same patterns of change and growth as did most of California during the Mexican and American periods. After California statehood, the American presence in the San Francisco Bay region increased steadily. The following is excerpted from City of Newark (2020).

> By the early 1850s, small landings were under construction along the San Francisco Bay area in the vicinity of Newark. In 1853, Mayhew's Landing included warehouses for wheat, hay, and coal and by 1856 the Mayhew Ranch included 1,500 acres of farmland extending inland to present-day I-880. Less than 20 years later, the Perrin brothers acquired the old Mayhews Ranch and extended their holdings to include property stretching from today's Jarvis Avenue on the north to south of Thornton Avenue. The Perrin brothers' "development project," the Green Point Dairy and Transportation Company, set the tone for future development. It was the Perrin brothers who first drew up plans to subdivide the Green Point Dairy into a townsite (located in the general vicinity of Thornton and Jarvis Avenues).
>
> Early swamp reclamation was started by E. Beard who patented the land in the area. Mr. Beard required capital and, in 1872, he sold 20,000 acres of swampland for $300,000 to Mr. J. Ross Browne. Mr. Browne outlined his swamp lands project before the State legislature on February 3, 1872. At this point, Mr. Browne referred to the proposed town site as "Cralvo" or "Cariboo." Browne created a circular that was distributed around Europe to promote the swamp lands project. An English capitalist bought an interest in the property and hired J. Barr Robertson (a Scotsman) to oversee his interests. Robertson was a director of the California Land Investment Co., Ltd., London, England. Robertson then bought out the interest that Mr. Browne had in the land. The name 'Newark' was chosen by Robertson, who named it after the castle "Newark" in Port Glasgow, Scotland.
>
> Work started on a railroad through the townsite from Dumbarton Point in 1875. That project was under-financed and never progressed beyond initial grading. In 1876, the railroad, together with the Green Point Dairy, were purchased by a San Francisco capitalist, Alfred Davis, and a Comstock millionaire, Jim Fair. They not only completed the South Pacific Coast Railroad, from Dumbarton Point south all the way to Santa Cruz, but also moved the town site to coincide with the curve on the railroad where the Railroad turned south toward San Jose. Soon, a railroad station, roundhouse, and railroad shop buildings were being erected in the center of Newark in the area between Thornton Avenue, Sycamore Street, and Carter Avenue.

> Eventually, the railroad was extended north from Newark to Alameda, providing direct ferry service to San Francisco.
>
> The completion of the railroad precipitated additional development in Newark. Hotels and stores were soon erected, along with some of the first manufacturing industries, including a railroad car building firm operated by Thomas and Martin Carter and a foundry which later manufactured Wedgewood stoves. These enterprises joined the production of salt, which had been underway in the Newark area since the 1850s. Acquisitions and mergers of salt production companies throughout the Bay area ultimately resulted in formation of the Arden Salt Company, predecessor to Leslie Salt Company and today's Cargill Salt.

The city of Newark lies close to Silicon Valley with its high-tech companies and digital technology. Over the twentieth century, industrial growth within and surrounding Newark, added to the economic base Various manufacturing companies were within the Newark area including the Wedgewood Company that manufactured stoves from the 1910s until the 1940s and Peterbilt which manufactured trucks in Newark from the early 1960s to the mid-1980s. In 1956, Trailmobile moved its manufacturing and assembly facility from Berkeley to a site adjacent to the Peterbilt factory. The facility was closed in 1975 and the company moved its operations to Illinois. From the mid-1950s through the early 1960s, the A.O. Smith Corporation of Illinois built residential and commercial grade glass-lined water heaters at a large manufacturing facility located in Newark on Sycamore Street. The plant was later acquired by the National Steel Corporation which continued the water heater manufacturing operations until the early 1970s.

In the early 1950s subdivisions in Southern Alameda County began talks of incorporation. In 1953, a group representing the chambers of commerce of Centerville, Irvington, Mission San Jose, Niles, Warm Springs, and Newark commissioned a study to incorporate all six communities into one large city. During the hearings Centerville and Niles began pressuring Newark into accepting an industrial zoning for the entire town of Newark so that it would become the major industrial area for the new Southern Alameda County city. However, the Newark Chamber of Commerce began its own movement to incorporate just Newark, and in September 1955 Newark was incorporated as the first new city in Alameda County in 47 years. Because of these efforts, Newark has built the Newark Mall, with its jobs and tax revenues, completed the Dumbarton Bridge and maintained and improved much of the Nimitz Freeway (City of Newark 2020).

3.4.1 History of the Project Area

The following history of the project area has been adapted from the History and Operations section of *Proposed Final Remedial Actions and Cleanup Standards: FMC Corporation, Newark, California* (England Geosystems, Inc. 2001).

FMC and predecessor companies manufactured chemicals at the project area from 1929 through 1995. The Sierra Magnesite Company first began chemical production at the site in 1929, manufacturing bromine and ethylene dibromide (EDB) from seawater bittern, and quick lime from oyster shells. EDB was manufactured primarily for agricultural use as a soil fumigant, while quicklime is used in a variety of manufacturing processes, including steel, cement, and glass. Sierra Magnesite became California

Chemical Company in 1934. California Chemical Company subsequently merged into Westvaco Chlorine Products Corporation in 1937.

In 1942, a pilot plant for a copper-based catalyst (1707 Catalyst) was built on land which was leased from Leslie Salt Company, and a plant for the full production of the catalyst was subsequently constructed. These catalyst plants were closed in 1944. Westvaco Chlorine Products Corporation merged with Food Machinery Corporation in 1948 to form Food Machinery and Chemical Corporation (later shortened to FMC Corporation).

A phosphate plant and phosphoric acid plant were constructed in 1950. Between 1955 and 1959, full scale manufacturing of the 1707 Catalyst was performed at the location of the former pilot plant. Leslie Salt Company assumed management of the property when the lease was terminated. The bromine towers and EDB plant were shut down, and the associated manufacturing facilities were removed in 1968.

In the mid-1960s, a small plant was constructed for manufacture of a proprietary catalyst; this facility was shut down in 1976. During that same year, a hydrogen peroxide (and other chemicals) distribution facility was constructed. FMC acquired an adjacent parcel from Designed Building Systems, Inc. (DBS) on August 16, 1988. The phosphate plant and phosphoric acid plant were shut down in 1994 and 1995, respectively. All former phosphate plant and phosphoric acid plant manufacturing facilities were removed by the end of 1996, and two 100,000-gallon fuel oil storage tanks were removed in 1999.

The project area is comprised of former industrial parcels and is not currently associated with any land use. Clean-up operations at the area began in the 1970s. Soil remediation activities in compliance with cleanup Order R2-2015-0017 from the California Regional Water Quality Control Board San Francisco Region were completed between August 2019 and December 2019, in which all excavated areas were backfilled with clean imported material to grades specified in approved workplans. No buildings remain within the project APE, and it is largely barren post-remediation. The City of San Francisco maintains a right-of-way for the Hetch-Hetchy Pipeline that bisects the project area.

4.0 RECORD SEARCHES

4.1 NORTHWEST INFORMATION CENTER RECORD SEARCH

A records search addressing the project area and a 0.5-mile radius beyond the project area boundary (together referred to as the study area) was conducted on April 17, 2018 at the Northwest Information Center (NWIC) in Rohnert Park by HELIX Archaeologist Katherine D. Thomas, M.A., RPA. Sources of information included previous survey and cultural resources files; the NRHP; the CRHR; the Office of Historic Preservation (OHP) Archaeological Determinations of Eligibility; the OHP Directory of Properties in the Historic Property Data File; and historical topographic maps and aerial photographs.

4.1.1 Previous Studies

The records search identified 18 previous cultural resources studies that have been conducted within the study area (Table 1).

Table 1. Previous Studies Conducted Within the Study Area

Report	Year	Author	Affiliation	Title
S-000814	1977	Peter Banks, David A. Fredrickson	Archaeological Laboratory, California State College, Sonoma	An Archaeological Investigation of Project #3, Zone 5 and Zone 6 of the Alameda County Flood Control and Water Conservation District
S-000898	1976	Edward M. Love, Miley Paul Holman, David Chavez	None	An Archaeological Reconnaissance of the Proposed Pipeline Routes and Reservoir Locations, Livermore-Amador Valley Water Management Agency, Alameda County, California
S-002597	1981	Miley Paul Holman	Holman & Associates	Archaeological subsurface testing of the Mayhew Landing Project, Newark, California
S-005858	1982	Miley Paul Holman	Holman & Associates	A report of a preliminary archaeological field reconnaissance of 9 development areas inside the City of Newark, Alameda County, California
S-007554	1985	Robert Cartier	Archaeological Resource Management	Cultural Resource Evaluation of the Hickory Street Industrial Development in the City of Newark, County of Alameda
S-012967	1973	Thomas L. Jackson	Adan E. Treganza Anthropology Museum, California State University, San Francisco	An Archaeological Impact Evaluation of the Proposed East Bay Dischargers Water Quality Management Interceptor Pipeline
S-012967a	1973	Thomas L. Jackson	Adan E. Treganza Anthropology Museum, California State University, San Francisco	An Archaeological Impact Evalutation of the Proposed East Bay Dischargers Water Quality Management Interceptor Pipeline
S-015742	1985	William Roop, Katherine Flynn, Jeff Parsons	Archaeological Resource Service	Cultural Resources Evaluation of a Proposed Earth Channel, Site 13, Zone 5, Line 1, a Project of the Alameda County Flood Control and Water Conservation District in the City of Newark, California
S-033248	2006	Allen G. Pastron, Andrew Gottsfield, Jennifer Redmond	Archeo-Tec	Archival Literature Review and Surface Survey for the Newark Pump Station Project, City of Newark, Alameda County, California
S-033249	2006	Allen G. Pastron, Andrew Gottsfield, Jennifer Redmond	Archeo-Tec	Archival Literature Review for the Willow/Central Avenue Sewer Rehabilitation Project, City of Newark, Alameda County, California
S-036481	2009	Adrian Whitaker, Phil Kaijankowski, Jack Meyer, Brian Byrd	Far Western Anthropological Research Group, Inc.	Archaeological Survey Report for the Dumbarton Rail Corridor Project, San Mateo and Alameda Counties, California
S-039019	2007	Colin I. Busby	Basin Research Associates, Inc.	Archaeological Records Search and Field Review, 42 Acre Property, Willow Street and Vicinity, City of Newark, Alameda County
S-039227	2012	Colin I. Busby	Basin Research Associates, Inc.	Archaeological Monitoring Summary Report - SFPUC BDPL 5, East Bay Segment, Alameda County
S-039227a	2010	None cited	Basin Research Associates	Archaeological Monitoring Plan (AMP), East Bay (Irvington Portal to Newark Valve House),

Report	Year	Author	Affiliation	Title
				San Francisco Public Utilities Commission (SFPUC) Water System Improvement Program (WSIP), Bay Division Pipeline Reliability Upgrade Project, Bay Division Pipeline No. 5 (BDPL No. 5)
S-039227b	2011	Colin I. Busby	Basin Research Associates, Inc.	Eastbay - Unexpected Discovery of Post-1900 Historic Period Artifacts, July 11, 2011, STA 77+70 to STA 77+82, BDPL 5, Alameda County
S-039604	2012	Adrian Whitaker, Phillip Kaijankoski, Jack Meyer, Brian F. Byrd, Sharon A. Waechter	Far Western Anthropological Research Group, Inc.	Archaeological Survey Report for the Dumbarton Rail Corridor Project, San Mateo and Alameda Counties, California
S-040929	2013	None cited	Basin Research Associates	Archaeological Data Recovery Report (SMA-83) (ADRR) and Final Archaeological Resources Report (FARR), San Francisco Public Utilities Commission, Water System Improvement Program, Bay Division Pipeline Reliability Upgrade Project, East Bay and Peninsula Bay Division Pipeline No. 5, Alameda and San Mateo Counties, California
S-043676	2014	Kirk Ranzetta, Leesa Gratreak, Patience Stuart, Katherine Du Tiel, Robin Scheswohl, Frances Kaplan	URS Corporation; SFPUC	Historic American Engineering Record, Bay Crossing Reach of the Bay Division Pipelines #1 & 2 (Hetch Hetchy Aqueduct), HAER No. CA-366

Two survey reports (S-00898 and S-036481) examined portions of the current APE; these are described below.

S-000898: This study, conducted in 1976, examined several proposed pipeline routes and reservoir locations for the Livermore-Amador Valley Water Management Agency. One of the pipeline route alternatives included the Hetch-Hetchy Aqueduct right-of way, which bisects the APE. No cultural resources were documented in the vicinity of the APE during this study.

S-036481: This study was conducted in 2009 in support of the Dumbarton Rail Corridor Project, which proposes to improve the existing railroad corridor between the West Bay and the East Bay. The study did not document or address any cultural resources in the vicinity of the APE other than the Dumbarton Cutoff portion of the Southern Pacific Railroad (see Section 4.1.2 below), but it did provide a geoarchaeological analysis of the cultural sensitivity of the area. The authors determined that the site of the proposed Newark Station, located west of the current APE, is situated on older Holocene alluvial fan deposits that date to the middle Holocene or earlier. As such, the area has a moderate potential to contain buried archaeological materials.

Three other reports (S-033249, S-39227, and S-43676) included portions of the APE in their study areas, but these studies documented only a literature review, construction monitoring, and Historic American Engineering Record respectively. None involved surveys of the APE.

4.1.2 Previously Documented Resources

Results from the search indicate that no previously recorded cultural resources are located within the APE, although tracks associated with the Dumbarton Cutoff portion of the Southern Pacific Railroad (P-01-001783) are located adjacent to the APE (Table 2).

Table 2. Previously Documented Resources within the Study Area

Primary	Trinomial	Description	Year	Recorder	Affiliation
P-01-001783	CA-ALA-623H	Southern Pacific Railroad Dumbarton Cutoff	1996	John Snyder	P.S. Preservation Services

P-01-001783: The Dumbarton Cutoff segment of the Southern Pacific Railroad, located immediately north of the APE, was recorded in 1996 by John Snyder. Snyder recommended the line eligible for the NRHP at the local level of significance in transportation and engineering. He found that under Criterion A, it is associated with system-wide improvements to the Southern Pacific Railroad that made it the standard railroad of the West and is inextricably linked with both the economic growth of San Francisco and national defense efforts during both world wars. Under Criterion B, it is associated with the life of E.H. Harriman, who drove the modernization of the Southern Pacific during the early twentieth century. Under Criterion C, contributive elements of the Cutoff, including its bridges, are representative examples of their type, period, and method of construction. Snyder also found that overall, the line retains integrity of location, setting, feeling, and association. SamTrans purchased the Dumbarton Cutoff from the Southern Pacific Railroad in 1994, although the segment has not been used since 1982.

In 2017, HELIX conducted a pedestrian survey of the area west of the current APE. The survey identified a railroad spur that diverges from the Dumbarton Cutoff approximately 1700 feet west of the APE, runs eastward parallel to the main track, and then curves to the south, terminating about 150 feet west of the APE. HELIX evaluated the spur as a potential contributor to the Dumbarton Cutoff, but recommended it did not contribute to the characteristics that qualify the Dumbarton Cutoff for listing on the NRHP.

4.2 NATIVE AMERICAN HERITAGE COMMISSION SACRED LANDS FILE SEARCH

A Sacred Lands File (SLF) search request was submitted to the NAHC on November 3, 2017. On November 17, 2017, a response was received from the NAHC indicating that the results of the SLF record search were negative for the project APE. Included with the response was a list of the following six Native American tribal representatives who may have additional information pertaining to the project which is contained in Appendix B:

- Andrew A. Galvan, The Ohlone Indian Tribe;
- Ann Marie Sayers, Indian Canyon Mutsun Band of Costanoan;
- Irenne Zwierlein, Amah Mutsun Tribal Band of Mission San Juan Bautista;
- Katherine Erolinda Perez, North Valley Yokuts Tribe;
- Rosemary Cambra, Muwekma Ohlone Tribe of the SF Bay Area; and
- Tony Cerda, Costanoan Rumsen Carmel Tribe.

4.3 SENATE BILL 18 TRIBAL CONSULTATION

Senate Bill (SB) 18 requires that the City initiate consultation with any tribes listed on the NAHC's official contact list for an amendment of a General Plan and Specific Plan. SB 18 requires the City to send a letter to each contact on the NAHC's SB 18 list, extending an invitation for consultation. Tribes have 90 days from receipt of the letter to request consultation. The City must also send a notice to all contacts 45 days prior to adopting or amending the General Plan and Specific Plan regardless of whether prior consultation has taken place, but the notice does not initiate a new consultation process. Lastly, the City must send notice of a public hearing to all tribes who have filed a written request for such notice as least 10 days prior to the hearing. For the City of Newark, the six tribes listed in Section 4.2 above previously submitted general request letters, requesting such noticing.

The proposed project includes General Plan and Specific Plan amendments, and formal invitations to participate in the SB 18 consultation process on the proposed project were sent by the City to six tribal representatives listed in Section 4.2 on October 20, 2020. Each tribe was provided a brief description of the project and its location, the contact information for the City's authorized representative, and a notification that the tribe has been invited to consult with the City on this project in accordance with Government Code Section 65352.3. As of December 2021, no tribe has responded requesting consultation under SB 18. The Native American correspondence relevant to the current analysis is contained in Appendix B.

5.0 PEDESTRIAN SURVEY

5.1 FMC WILLOW AREA OF POTENTIAL EFFECTS

On May 6, 2020, HELIX Staff Archaeologist Katherine D. Thomas, M.A, RPA conducted an intensive pedestrian survey to characterize any prehistoric or historic-era archaeological resources located within the FMC Willow portion of the APE. The survey consisted of a pedestrian walk-over of all accessible portions of the APE in parallel transects spaced at 15-meter intervals. During the survey, the ground surface was examined for the presence of historic-era artifacts (e.g., metal, glass, ceramics), prehistoric artifacts (e.g., flaked stone tools, tool-making debris), and other features that might represent human activity that took place more than 50 years ago. Representative photographs of the APE are found in Appendix C.

Survey conditions were poor, with less than 20% surface visibility due to heavy grass cover in areas that were not capped by asphalt or industrial pads (Photograph 1). The entire FMC Willow portion of the APE is flat, and its eastern portion is almost entirely overgrown with grass (Photographs 2 and 3). The eastern portion is also bisected from east to west by the Hetch Hetchy pipeline ROW, a 100-foot-wide corridor that has been excluded from the project and is not part of the APE except for where the proposed Hickory Street extension crosses the Hetch Hetchy ROW within an existing 80-foot easement.

In contrast, the western portion of the FMC Willow APE is almost completely covered in the remains of concrete industrial pads and asphalt access roads, some of which are lined with trees (Photographs 4

and 5). The western section also includes areas that are currently used for staging construction equipment and materials (Photograph 6).

No historic-era resources were found within the FMC Willow APE, although approximately 30 feet north of the northern border of the APE is the Dumbarton Cutoff (P-01-001783), a railroad grade that was formerly a component of the Southern Pacific Railroad and is now owned by SamTrans. The Dumbarton Cutoff has previously been evaluated for significance and was recommended eligible for listing in the NRHP.

No prehistoric resources have been previously recorded within the FMC Willow APE or a 0.50-mile radius around the APE, and none were identified during the field survey. Given its history of industrial use and previous ground disturbance, the APE is considered to have a low sensitivity for prehistoric resources.

5.2 GRAND PARK AREA OF POTENTIAL EFFECTS

On April 26, 2021, HELIX Archaeologist Katherine D. Thomas surveyed the APE for the Grand Park portion of the project. The Grand Park APE partially developed land surrounded by industrial and commercial buildings in the western section of the City of Newark. The APE has been partially paved, and there is very little surface visibility present (Photograph 7). Additionally, the unpaved areas are covered in grass, gravel, and equipment that further obscures the surface. A portion of the railroad spur evaluated by HELIX and found ineligible in 2017 is visible in the northern portion of the APE (Photograph 8). The Grand Park APE is completely flat, with the exception of a small, raised area that has been recently created using fill from work being done elsewhere on the parcel. The APE used to contain a warehouse, but that has been removed (Photograph 9), and the APE is currently being used for equipment storage (Photograph 10).

No historic age or pre-contact resources have been previously recorded within the APE, and none were found during the field survey. Therefore, the Grand Park portion of the APE is considered to have a very low sensitivity for historic age or pre-contact resources.

6.0 SUMMARY AND RECOMMENDATIONS

6.1 SUMMARY

HELIX has assessed the APE for the presence/absence of cultural resources that may be impacted by the proposed project. No prehistoric or historic-era resources have been previously recorded within the FMC Willow and Grand Park APEs, and none were identified during the pedestrian survey. Given the project area's disturbed setting and long history of industrial use, we conclude that there is a low potential of identifying Native American resources and a low to moderate potential of identifying historic-period resources during ground-disturbing activities associated with the proposed project.

A search of the NAHC's Sacred Lands File returned a negative result, suggesting that there are no known Native American resources in the immediate vicinity, and to date, no responses have been received from the Native American individuals who were contacted about the proposed project. The results of this assessment indicate there would be no impacts to significant cultural resources of prehistoric or historic age by the proposed project, and therefore no additional studies, archaeological work, or construction monitoring are recommended. However, HELIX recommends that procedures be in place to address unanticipated discoveries during construction. These, as well as procedures to address the accidental discovery of human remains, are provided below.

6.2 RECOMMENDATIONS

6.2.1 Accidental Discovery of Cultural Resources

In the event that cultural resources are exposed during ground-disturbing activities, construction activities should be halted in the immediate vicinity of the discovery. If the site cannot be avoided during the remainder of construction, an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards should be retained to evaluate the find's significance under CEQA. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted and should be discussed in consultation with the City.

6.2.2 Accidental Discovery of Human Remains

Although considered highly unlikely, there is always the possibility that ground disturbing activities during construction may uncover previously unknown human remains. In the event of an accidental discovery or recognition of any human remains, PRC Section 5097.98 must be followed. Once project-related earthmoving begins and if there is a discovery or recognition of human remains, the following steps shall be taken:

1. There shall be no further excavation or disturbance of the specific location or any nearby area reasonably suspected to overlie adjacent human remains until the County Coroner is contacted to determine if the remains are Native American and if an investigation of the cause of death is required. If the coroner determines the remains are Native American, the coroner shall contact the NAHC within 24 hours, and the NAHC shall identify the person or persons it believes to be the "most likely descendant" of the deceased Native American. The most likely descendant may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains, and any associated grave goods as provided in PRC Section 5097.98, or

2. Where the following conditions occur, the landowner or his/her authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity either in accordance with the recommendations of the most likely descendent or on the project area in a location not subject to further subsurface disturbance:

    - The NAHC is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 48 hours after being notified by the commission;
    - The descendent identified fails to make a recommendation; or,

- The landowner or his authorized representative rejects the recommendation of the descendent, and the mediation by the NAHC fails to provide measures acceptable to the landowner.

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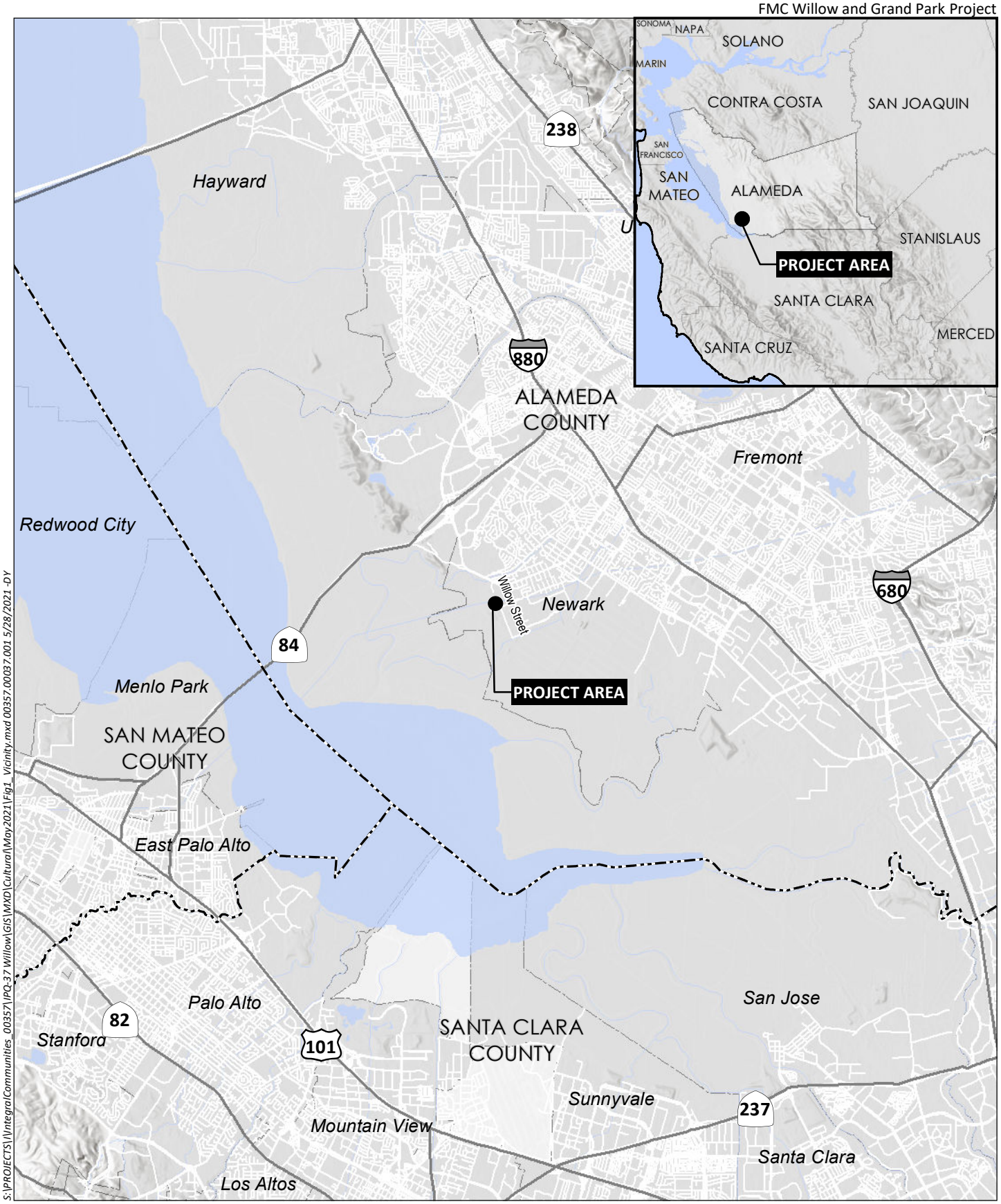
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Appendix A

Figures



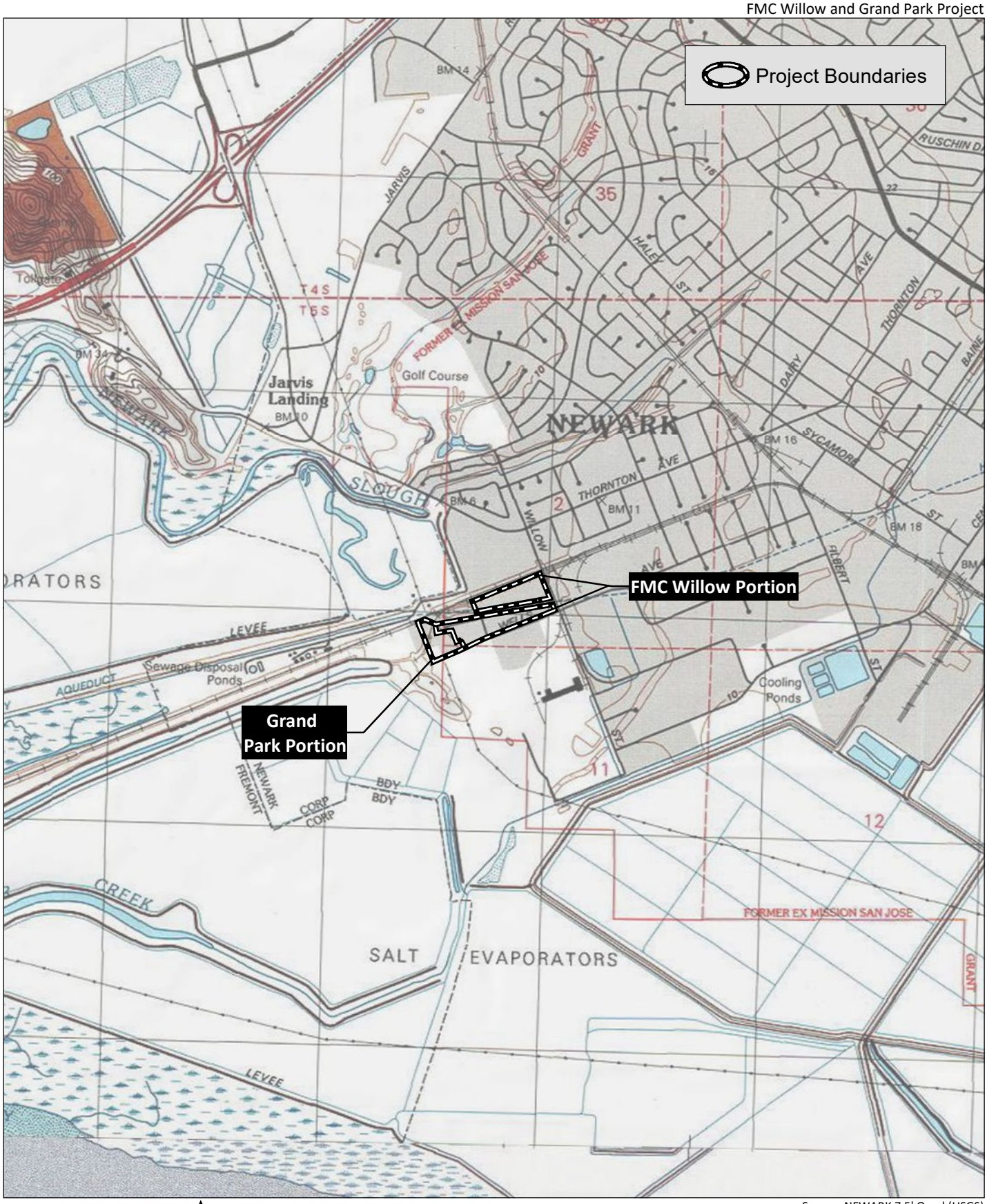
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Source: Base Map Layers (Esri, USGS, NGA, NASA)

HELIX Environmental Planning

Project Vicinity Map

Figure 1



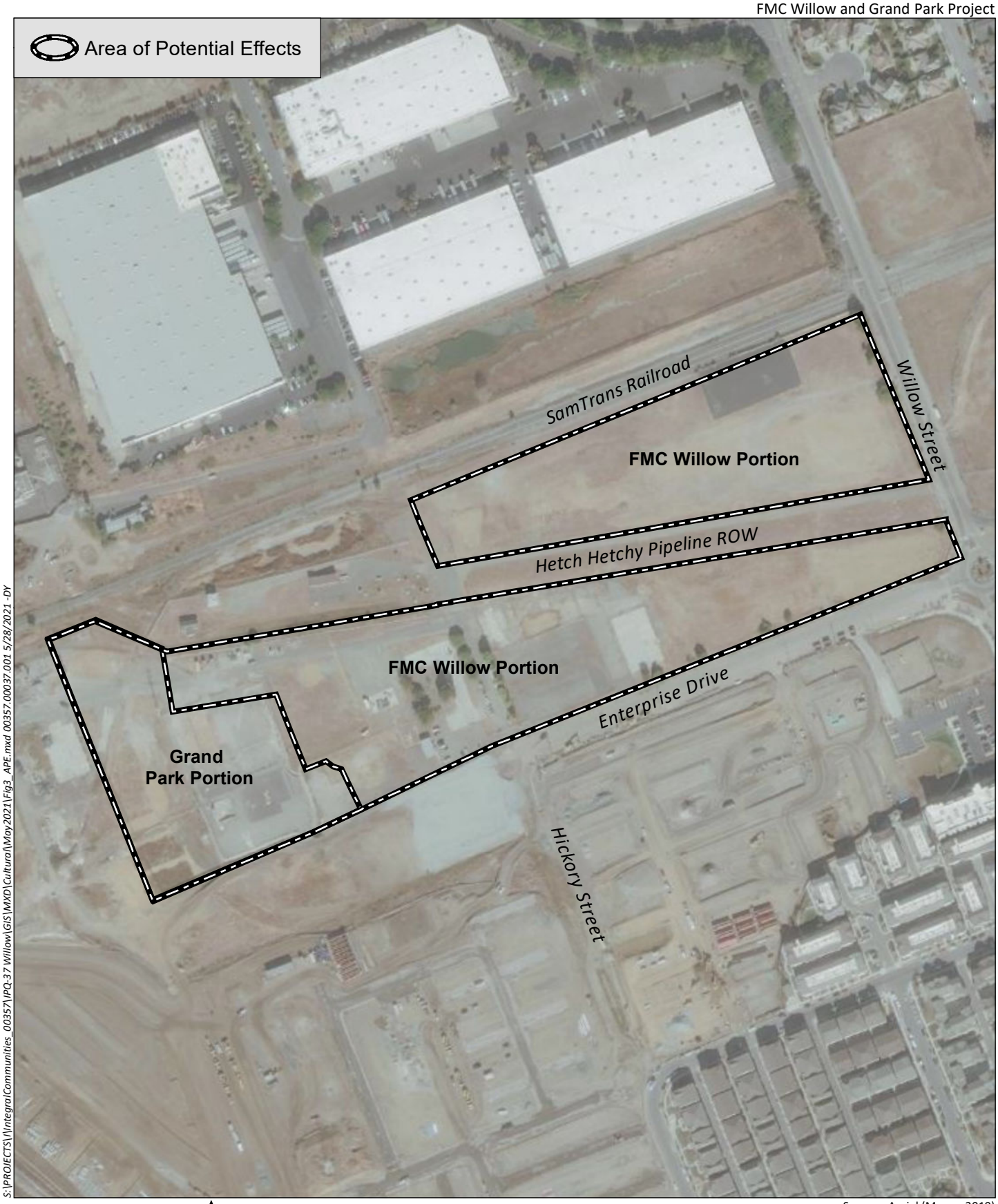
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Source: NEWARK 7.5' Quad (USGS)

HELIX Environmental Planning

Project Location Map

Figure 2



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Source: Aerial (Maxar, 2019)

HELIX Environmental Planning

Areas of Potential Effect Map

Figure 3

Appendix B

Native American Correspondence

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
Environmental and Cultural Department
1550 Harbor Blvd., ROOM 100
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

November 15, 2017

Carrie Wills
Helix EPI

Email to: carriew@helixepi.com

RE: City of Newark Project IPQ 24, Alameda County

Dear Ms. Wills,

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not preclude the presence of cultural resources in any project area. Other sources for cultural resources should also be contacted for information regarding known and/or recorded sites.

Enclosed is a list of Native Americans tribes who may have knowledge of cultural resources in the project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these tribes, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at 916-573-1033 or frank.lienert@nahc.ca.gov.

Sincerely,

Frank Lienert
Associate Governmental Program Analyst

Native American Heritage Commission
Native American Contacts
11/15/2017

Coastanoan Rumsen Carmel Tribe
Tony Cerda, Chairperson
244 E. 1st Street
Pomona , CA 91766
rumsen@aol.com
(909) 524-8041 Cell
(909) 629-6081
Ohlone/Costanoan

Indian Canyon Mutsun Band of Costanoan
Ann Marie Sayers, Chairperson
P.O. Box 28
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ams@indiancanyon.org
(831) 637-4238
Ohlone/Costanoan

Amah MutsunTribal Band of Mission San Juan Bautista
Irenne Zwierlein, Chairperson
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(650) 332-1526 Fax
Ohlone/Costanoan

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Ohlone/Costanoan
Northern Valley Yokuts
Bay Miwok

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Rosemary Cambra, Chairperson
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muwekma@muwekma.org
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Ohlone / Costanoan

The Ohlone Indian Tribe
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(510) 882-0527 Cell

(510) 687-9393 Fax
Ohlone/Costanoan
Bay Miwok
Plains Miwok
Patwin

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessments for the City of Newark Project IPQ 24, Alameda County

COMMUNITY DEVELOPMENT DEPARTMENT
CITY OF NEWARK, CALIFORNIA

37101 Newark Boulevard • Newark, California 94560-3796 • (510) 578-4330 • FAX (510) 578-4265

October 20, 2020

Andrew Galvan, Chairperson
The Ohlone Indian Tribe
P.O. Box 3152
Fremont, CA 94539

Subject: Native American Cultural Resources Consultation for the FMC Willow and Bayside Grand Park Projects Pursuant to Government Code Section 65352.3

Dear Chairperson Galvan:

The City of Newark formally invites you to request consultation pursuant to Senate Bill 18 (SB 18; Government Code Section 65352.3) regarding the FMC Willow and Bayside Grand Park projects within the Dumbarton Transit Oriented Development (TOD) Specific Plan area in the City of Newark, California. SB 18 requires local governments to consult with California Native American Tribes about local land use planning decisions for the purpose of protecting traditional tribal cultural places and sacred sites. Both proposed projects would require an Amendment to the City of Newark General Plan and therefore are subject to the requirements of SB 18.

Project Locations and Descriptions

The proposed project sites are located within the City of Newark in southwestern Alameda County, northwest of the intersection of Willow Street and Enterprise Drive. The proposed FMC Willow Project would be located on Assessor's Parcel Number (APN) 092-0100-005 and on portions of APNs 537-0852-001-08 and 537-0852-002-09. The majority of the proposed FMC Willow project sites is located in Sections 2 and 11, of Township 5 South, and Range 2 West of the U.S. Geological Survey (USGS) 7.5-minute "Newark" quadrangle map (quad). The western portion of the FMC Willow site and the Bayside Grand Park site are unsectioned (unsurveyed).

The Bayside Grand Park Project would be located primarily on APNs 537-0852-001-02 and 537-0852-07, with a small portion within APN 537-0852-08. A small portion of the Bayside Grand Park located along the western edge of the proposed project site is currently zoned for parks and recreational use. The remainder of the project site is not currently designated for parks and recreational use and will require a General Plan Amendment (see Figure 3 for the existing General Plan land use designations and proposed changes). We are inviting you to consult on the portion of the proposed Bayside Grand Park project site that requires a General Plan Amendment from Community Commercial and Public Institutional to Parks and Recreational Facilities as indicated on Figure 3.

Both project sites are vacant following soil remediation that removed industrial contaminants that were remnants of prior uses. The proposed FMC Willow Project would redevelop a former industrial, approximately 18-acre site into a multi-family residential community including a mixed-use area with retail and affordable residential units, a community building with townhouses, a bus transit station, and medium/high-density residential units in six planning areas. The project would also provide a trail along the northern boundary of the project site that is eligible to be part of the regional San Francisco Bay Trail, a bicycle and pedestrian trail that will eventually allow continuous travel around the shoreline of San Francisco Bay. The Bayside Grand Park Project would redevelop a former industrial site to establish a 5-acre park with open space and recreational opportunities to serve the surrounding community.

The Hetch Hetchy Right-of-Way (ROW) is a 100-foot wide corridor that transects the FMC Willow Project site and runs along the northeast corner of the Bayside Grand Park Project site. Approximately 8 acres of the FMC Willow Project site lies north of the Hetch Hetchy ROW, and approximately 10 acres of the FMC Willow Project site lies south of the Hetch Hetchy ROW.

Prior Surveys of Cultural Resources and Prior Notification

On May 6, 2020, HELIX Environmental Planning, Inc. (HELIX) Staff Archaeologist Katherine D. Thomas, M.A, RPA conducted an intensive pedestrian survey to characterize any prehistoric or historic-era archaeological resources located within the Areas of Potential Effect (APE). The survey consisted of a pedestrian walk-over of all accessible portions of the APE in parallel transects spaced at 15-meter intervals. During the survey, the ground surface was examined for the presence of historic-era artifacts (e.g., metal, glass, ceramics), prehistoric artifacts (e.g., flaked stone tools, tool-making debris), and other features that might represent human activity that took place more than 50 years ago. No historic-era resources were found within the APE, although approximately 30 feet north of the northern border of the APE is the Dumbarton Cutoff (P-01-001783), a railroad grade that was formerly a component of the Southern Pacific Railroad and is now owned by SamTrans. The Dumbarton Cutoff has previously been evaluated for significance and was recommended eligible for listing in the NRHP. No prehistoric resources have been previously recorded within the APE or a 0.50-mile radius, and none were identified during the field survey. Given its history of industrial use and previous ground disturbance, the APE is considered to have a low sensitivity for prehistoric resources.

A Sacred Lands File (SLF) search request was submitted to the Native American Heritage Commission (NAHC) on November 3, 2017 for the FMC Willow project. On November 17, 2017, a response was received from the NAHC indicating that the results of the SLF record search were negative for the project Area of Potential Effect (APE). Included with the response from the NAHC was a list of six Native American tribal representatives who may have additional information pertaining to the project. On November 28, 2017, HELIX Environmental Planning, Inc. (HELIX) sent information request letters to each of the representatives listed asking for any additional information they may have. HELIX noted that the request was for informational purposes only. To date, no responses have been received from any of the tribal representatives.

Conclusion

We are inviting you to consult with us regarding the potential for these projects to impact known ancestral tribal sites or cultural resources in accordance with Government Code Section 65352.3. If ancestral tribal sites or cultural resources are known to occur within the projects' APE, your prompt response to request consultation, in writing, with the City of Newark for the purpose of identifying potentially significant impacts of the projects, alternatives to the projects as proposed, and recommended mitigation measures would be much appreciated.

Lead Agency Contact

City of Newark Community Development Department
Art Interiano, Deputy Community Development Director
37101 Newark Boulevard
Newark, CA 94560
Art.Interiano@newark.org

Please contact me directly by e-mail or mail as noted above should you wish to consult with us on either or both projects in accordance with Government Code Section 65352.3.

Sincerely,

Art Interiano
Deputy Community Development Director

Enclosures:

Figure 1 – Vicinity Map
Figure 2 – Project Locations Map
Figure 3 - General Plan Land Use Changes Map
Figure 4 – Areas of Potential Effect Map

COMMUNITY DEVELOPMENT DEPARTMENT
CITY OF NEWARK, CALIFORNIA

37101 Newark Boulevard • Newark, California 94560-3796 • (510) 578-4330 • FAX (510) 578-4265

October 20, 2020

Ann Marie Savers, Chairperson
Indian Canyon Mutsun Band of Costanoan
P.O. Box 28
Hollister, CA 95024

Subject: Native American Cultural Resources Consultation for the FMC Willow and Bayside Grand Park Projects Pursuant to Government Code Section 65352.3

Dear Chairperson Savers:

The City of Newark formally invites you to request consultation pursuant to Senate Bill 18 (SB 18; Government Code Section 65352.3) regarding the FMC Willow and Bayside Grand Park projects within the Dumbarton Transit Oriented Development (TOD) Specific Plan area in the City of Newark, California. SB 18 requires local governments to consult with California Native American Tribes about local land use planning decisions for the purpose of protecting traditional tribal cultural places and sacred sites. Both proposed projects would require an Amendment to the City of Newark General Plan and therefore are subject to the requirements of SB 18.

Project Locations and Descriptions

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The Bayside Grand Park Project would be located primarily on APNs 537-0852-001-02 and 537-0852-07, with a small portion within APN 537-0852-08. A small portion of the Bayside Grand Park located along the western edge of the proposed project site is currently zoned for parks and recreational use. The remainder of the project site is not currently designated for parks and recreational use and will require a General Plan Amendment (see Figure 3 for the existing General Plan land use designations and proposed changes). We are inviting you to consult on the portion of the proposed Bayside Grand Park project site that requires a General Plan Amendment from Community Commercial and Public Institutional to Parks and Recreational Facilities as indicated on Figure 3.

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Lead Agency Contact

City of Newark Community Development Department
Art Interiano, Deputy Community Development Director
37101 Newark Boulevard
Newark, CA 94560
Art.Interiano@newark.org

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Sincerely,

Art Interiano
Deputy Community Development Director

Enclosures:

Figure 1 – Vicinity Map
Figure 2 – Project Locations Map
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COMMUNITY DEVELOPMENT DEPARTMENT
CITY OF NEWARK, CALIFORNIA

37101 Newark Boulevard • Newark, California 94560-3796 • (510) 578-4330 • FAX (510) 578-4265

October 20, 2020

Irenne Zwierlein, Chairperson
Amah Mutsun Tribal Band of Mission San Juan Bautista
789 Canada Road
Woodside, CA 94062

Subject: Native American Cultural Resources Consultation for the FMC Willow and Bayside Grand Park Projects Pursuant to Government Code Section 65352.3

Dear Chairperson Zwierlein:

The City of Newark formally invites you to request consultation pursuant to Senate Bill 18 (SB 18; Government Code Section 65352.3) regarding the FMC Willow and Bayside Grand Park projects within the Dumbarton Transit Oriented Development (TOD) Specific Plan area in the City of Newark, California. SB 18 requires local governments to consult with California Native American Tribes about local land use planning decisions for the purpose of protecting traditional tribal cultural places and sacred sites. Both proposed projects would require an Amendment to the City of Newark General Plan and therefore are subject to the requirements of SB 18.

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Both project sites are vacant following soil remediation that removed industrial contaminants that were remnants of prior uses. The proposed FMC Willow Project would redevelop a former industrial, approximately 18-acre site into a multi-family residential community including a mixed-use area with retail and affordable residential units, a community building with townhouses, a bus transit station, and medium/high-density residential units in six planning areas. The project would also provide a trail along the northern boundary of the project site that is eligible to be part of the regional San Francisco Bay Trail, a bicycle and pedestrian trail that will eventually allow continuous travel around the shoreline of San Francisco Bay. The Bayside Grand Park Project would redevelop a former industrial site to establish a 5-acre park with open space and recreational opportunities to serve the surrounding community.

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Lead Agency Contact

City of Newark Community Development Department
Art Interiano, Deputy Community Development Director
37101 Newark Boulevard
Newark, CA 94560
Art.Interiano@newark.org

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Sincerely,

Art Interiano
Deputy Community Development Director

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COMMUNITY DEVELOPMENT DEPARTMENT
CITY OF NEWARK, CALIFORNIA

37101 Newark Boulevard • Newark, California 94560-3796 • (510) 578-4330 • FAX (510) 578-4265

October 20, 2020

Katherine Erolinda Perez, Chairperson
North Valley Yokuts Tribe
P.O. Box 717
Linden, CA 95236

Subject: Native American Cultural Resources Consultation for the FMC Willow and Bayside Grand Park Projects Pursuant to Government Code Section 65352.3

Dear Chairperson Perez:

The City of Newark formally invites you to request consultation pursuant to Senate Bill 18 (SB 18; Government Code Section 65352.3) regarding the FMC Willow and Bayside Grand Park projects within the Dumbarton Transit Oriented Development (TOD) Specific Plan area in the City of Newark, California. SB 18 requires local governments to consult with California Native American Tribes about local land use planning decisions for the purpose of protecting traditional tribal cultural places and sacred sites. Both proposed projects would require an Amendment to the City of Newark General Plan and therefore are subject to the requirements of SB 18.

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COMMUNITY DEVELOPMENT DEPARTMENT
CITY OF NEWARK, CALIFORNIA

37101 Newark Boulevard • Newark, California 94560-3796 • (510) 578-4330 • FAX (510) 578-4265

October 20, 2020

Rosemary Cambra, Chairperson
Muwekma Ohlone Indian Tribe of the SF Bay Area
P.O. Box 360791
Milpitas, CA 95036

Subject: Native American Cultural Resources Consultation for the FMC Willow and Bayside Grand Park Projects Pursuant to Government Code Section 65352.3

Dear Chairperson Cambra:

The City of Newark formally invites you to request consultation pursuant to Senate Bill 18 (SB 18; Government Code Section 65352.3) regarding the FMC Willow and Bayside Grand Park projects within the Dumbarton Transit Oriented Development (TOD) Specific Plan area in the City of Newark, California. SB 18 requires local governments to consult with California Native American Tribes about local land use planning decisions for the purpose of protecting traditional tribal cultural places and sacred sites. Both proposed projects would require an Amendment to the City of Newark General Plan and therefore are subject to the requirements of SB 18.

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CITY OF NEWARK, CALIFORNIA

37101 Newark Boulevard • Newark, California 94560-3796 • (510) 578-4330 • FAX (510) 578-4265

October 20, 2020

Tony Cerda, Chairperson
Coastanoan Rumsen Carmel Tribe
244 E. 1st Street
Pomona, CA 91766

Subject: Native American Cultural Resources Consultation for the FMC Willow and Bayside Grand Park Projects Pursuant to Government Code Section 65352.3

Dear Chairperson Cerda:

The City of Newark formally invites you to request consultation pursuant to Senate Bill 18 (SB 18; Government Code Section 65352.3) regarding the FMC Willow and Bayside Grand Park projects within the Dumbarton Transit Oriented Development (TOD) Specific Plan area in the City of Newark, California. SB 18 requires local governments to consult with California Native American Tribes about local land use planning decisions for the purpose of protecting traditional tribal cultural places and sacred sites. Both proposed projects would require an Amendment to the City of Newark General Plan and therefore are subject to the requirements of SB 18.

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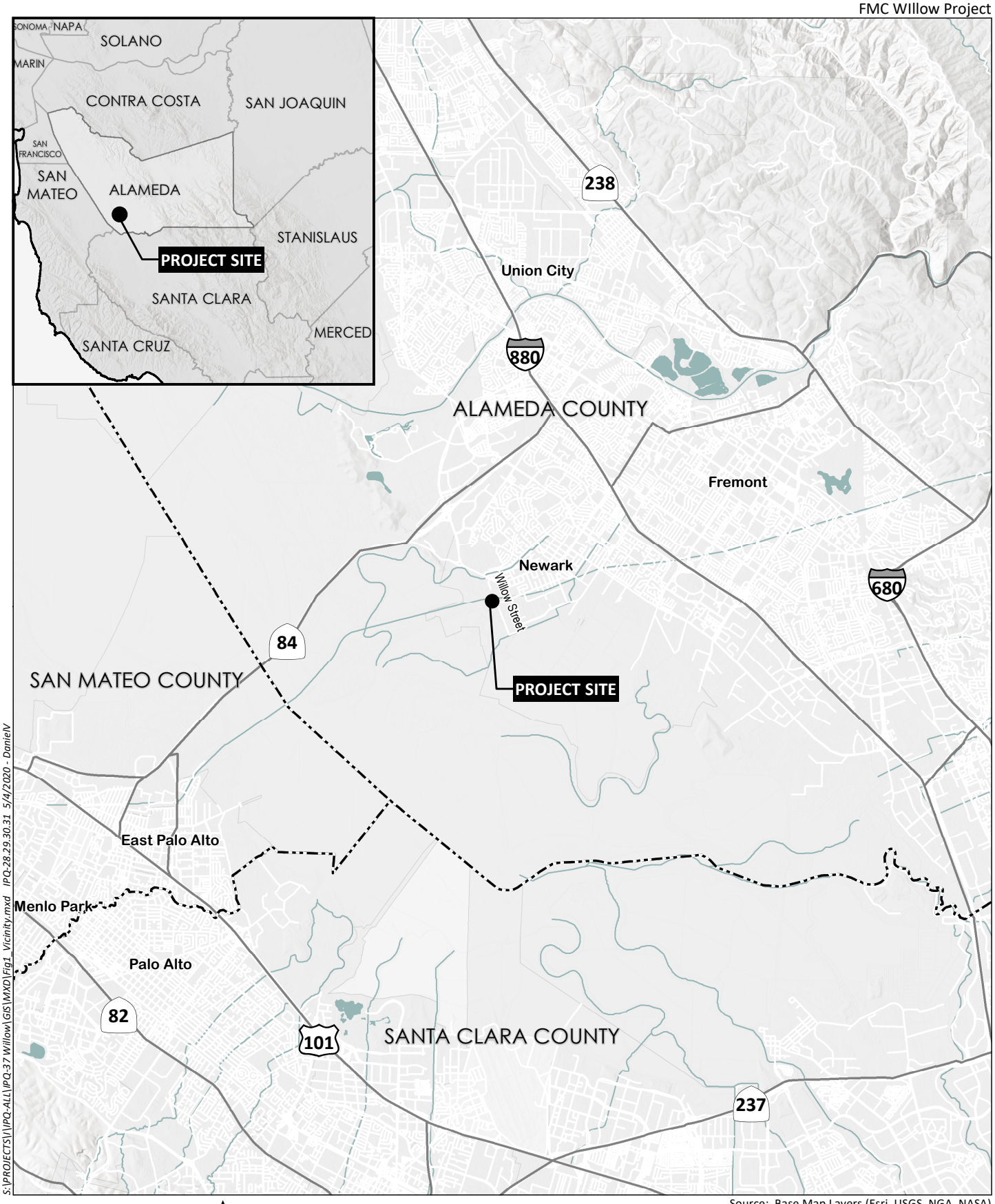
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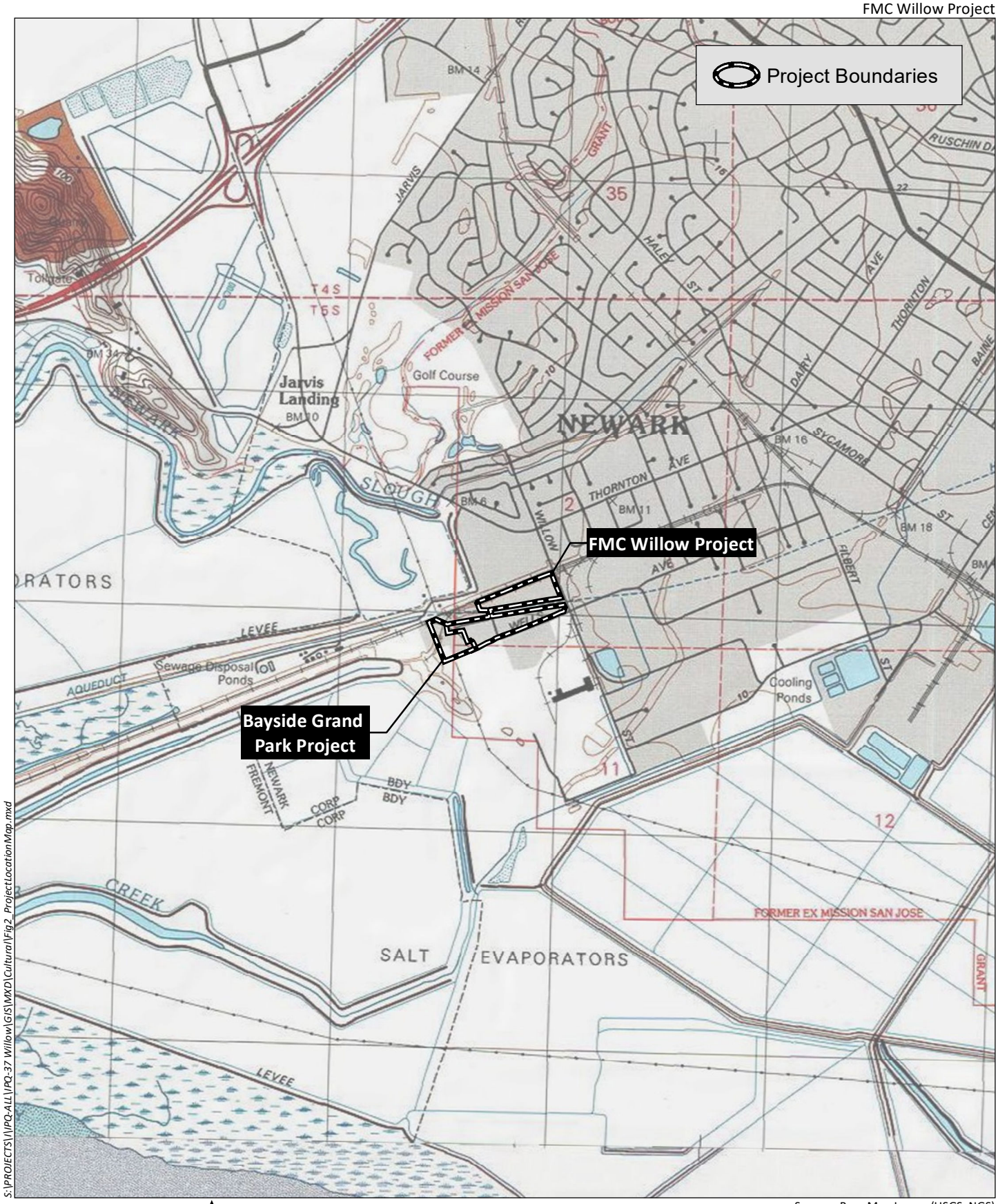


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HELIX Environmental Planning

Vicinity Map

Figure 1



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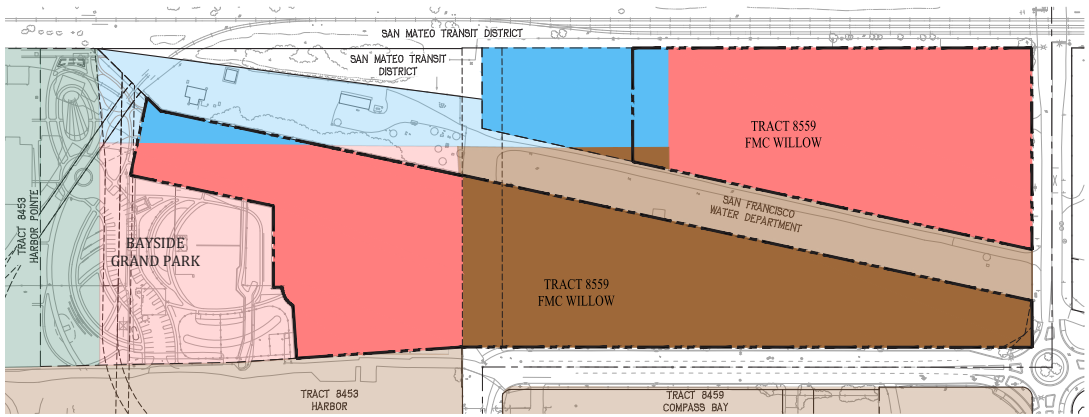
0 2,000 Feet

Source: Base Map Layers (USGS, NGS)

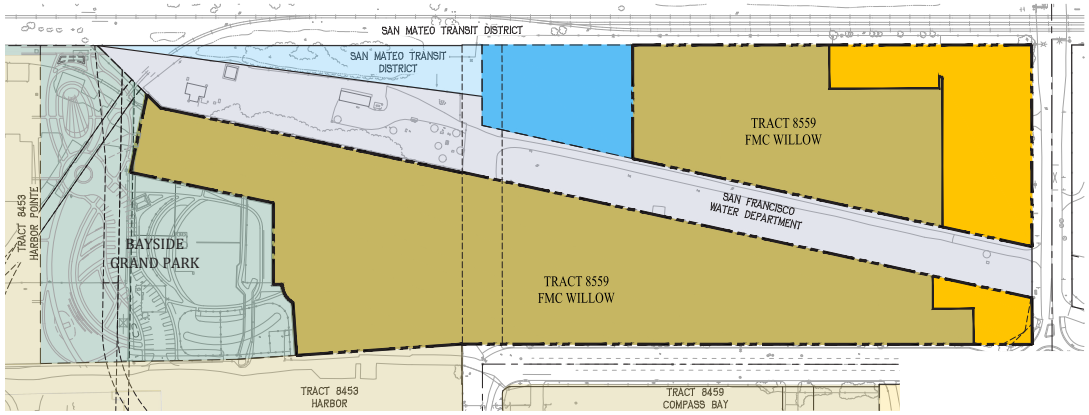
HELIX Environmental Planning

Project Location Map

Figure 2



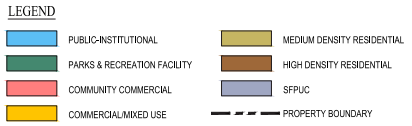
ORIGINAL LAND USE PER GENERAL PLAN

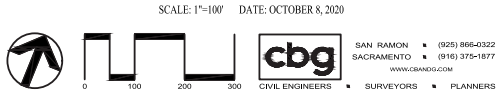


PROPOSED LAND USE CHANGES

ORIGINAL GENERAL PLAN LAND USE VS PROPOSED LAND USE

LAND USE CATEGORY	ORIGINAL LAND USE (PER GENERAL PLAN)	PROPOSED LAND USE	PROPOSED LAND USE CHANGE
PUBLIC INSTITUTIONAL	1.9 AC±	1.4 AC±	(0.5) AC±
COMMERCIAL/MIXED USE	0.0 AC	2.4 AC±	2.4 AC±
COMMUNITY COMMERCIAL	9.3 AC±	0.0 AC±	(9.3) AC±
MEDIUM DENSITY RESIDENTIAL	0.0 AC	12.7 AC±	12.7 AC±
HIGH DENSITY RESIDENTIAL	5.9 AC±	0.0 AC±	(5.9) AC±
PUBLIC STREETS	0.0 AC±	0.6 AC±	0.6 AC±

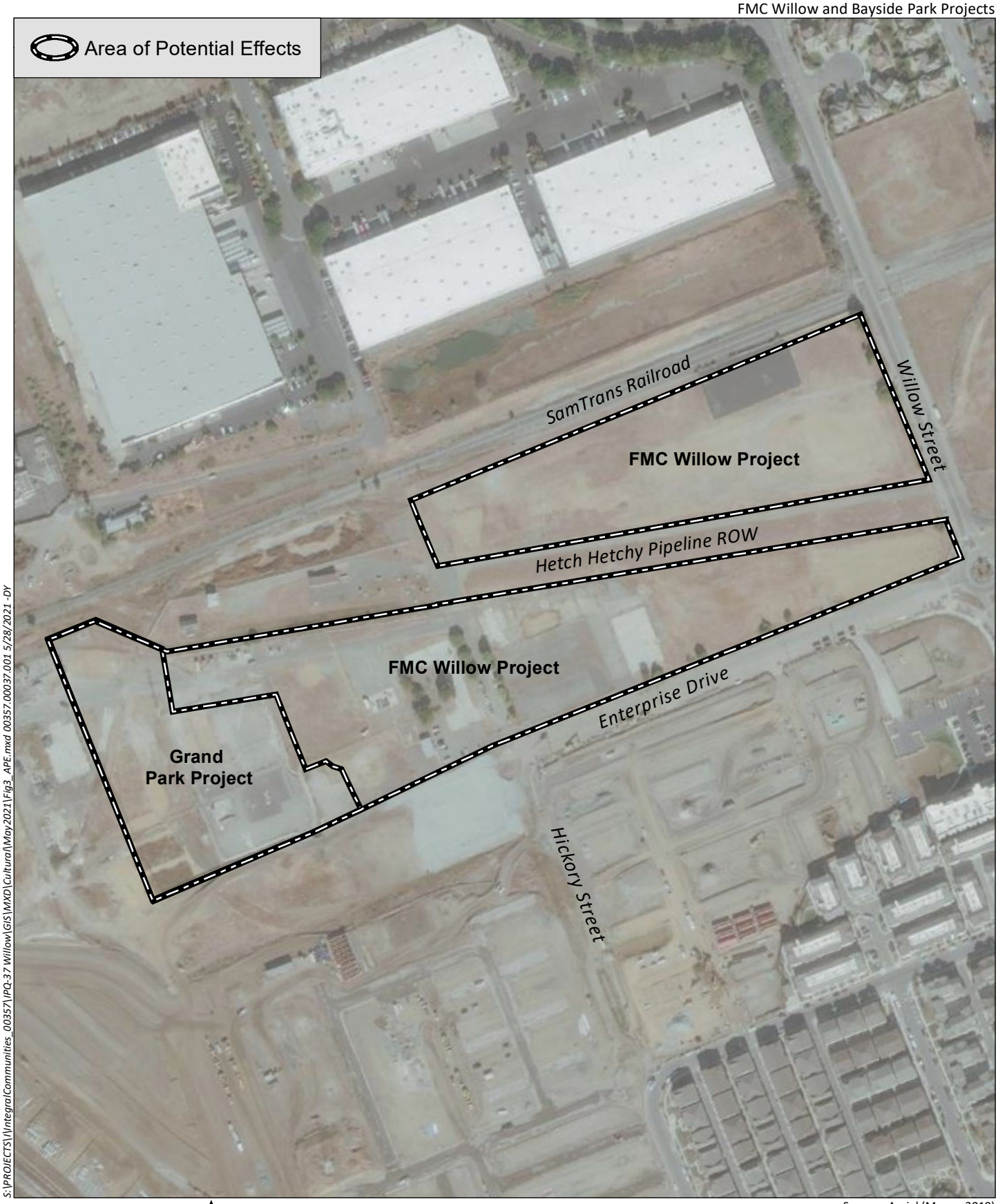




Source: CBG Civil Engineers 2020

General Plan Land Use Changes

Figure 3



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0 300 Feet

Source: Aerial (Maxar, 2019)

HELIX Environmental Planning

Areas of Potential Effect Map

Figure 4

Appendix C

Photographs



Photograph 1: Overview of the FMC Willow APE showing poor ground surface visibility, looking west.



Photograph 2: Overview of the eastern portion of the FMC Willow APE, looking north.



Photograph 3: Overview of the eastern portion of the FMC Willow APE, looking east.



Photograph 4: Overview of the western portion of the FMC Willow APE, looking south.



Photograph 5: Overview of the western portion of the FMC Willow APE, looking northeast.



Photograph 6: Construction equipment and materials staging in the western portion of the FMC Willow APE, looking west.



Photograph 7: Example of surface visibility in the Grand Park APE, looking northeast.



Photograph 8: View of Southern Pacific Railroad split off into the Grand Park APE, looking southeast.



Photograph 9: Location of a former warehouse in the Grand Park APE, looking southeast.



Photograph 10: Overview of western portion of the Grand Park APE, looking southeast.

Appendix E

Due Diligence Geotechnical Investigation for the FMC - Willow Parcel

DUE DILIGENCE GEOTECHNICAL INVESTIGATION
FMC - WILLOW PARCEL
ENTERPRISE DRIVE AT HICKORY STREET
NEWARK, CALIFORNIA

For

THE WILLOW PROJECT OWNER, LLC

August 22, 2018

Job No. 3983.100

Via E-Mail Only

BERLOGAR STEVENS & ASSOCIATES

August 22, 2018
Job No. 3983.100

Mr. Glenn Brown
The Willow Project Owner, LLC
500 La Gonda Way, Suite 102
Danville, California 94526

Subject: Due Diligence Geotechnical Investigation
FMC – Willow Parcel
Enterprise Drive at Hickory Street
Newark, California

Dear Mr. Brown:

Berlogar Stevens & Associates (BSA) is pleased to present our Due Diligence Geotechnical Investigation report for the FMC - Willow Parcel, in Newark, California. The scope of this investigation, our geotechnical engineering conclusions regarding the soils, groundwater and geologic conditions at the site, and our preliminary recommendations related to site grading, underground utilities, building foundations and pavements, are presented below.

PROPOSED SITE DEVELOPMENT

It is our understanding that the site will be redeveloped with a change in usage from industrial to residential, with a portion of the site designated for a future public park. The details of the residential development have not been defined; based on current housing trends the development could range from one- to three-story wood frame, single-family detached to two- and three-story multi-unit residential dwellings. Redevelopment of the site will require clearing of the remnants of the industrial complex that previously occupied the site, import of fill to raise site grades up to approximately 5 feet above existing grades, and construction of underground utilities and roads.

PURPOSE AND SCOPE OF SERVICES

The purpose of this Due Diligence Geotechnical Investigation was to identify soil and groundwater conditions, as well as potential geologic hazards, based on review of readily available published geologic maps and reports, information held in our files from past geotechnical investigations on adjoining and nearby properties, and unpublished consultant reports on adjoining and nearby properties. The potential impacts of the soil and groundwater conditions, as well as geologic hazards on the proposed redevelopment of the site as a residential

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subdivision were evaluated. Preliminary geotechnical recommendations for site preparation and grading, and building foundations were developed and are presented in this report. The scope of services for this investigation was outlined in our proposal of August 3, 2018.

SITE LOCATION, HISTORY AND SURFACE CONDITIONS

The proposed development site is located at the western limits of the City of Newark, California, as shown on the Vicinity Map, Plate 1. The site is west of Willow Street and north of Enterprise Drive. Union Pacific Railroad tracks are located along the north side of the project site. The Willow Parcel is comprised of three parcels identified as APNs 537-0852-001-02, 092-0100-005 and the northern side of 537-0852-002-07. As shown on the Site Plan, Plate 2, there are two identified development areas, the Park Redevelopment Area and the Willow Redevelopment Area. The Park site covers about 5 acres. The Willow site, which is bisected by the Hetch-Hetchy Pipeline Right of Way, covers a combined area of about 17 acres. The Willow Redevelopment Area is the site of proposed residential development.

The site was previously occupied by a FMC industrial facility.

Phosphoric acid and phosphate was produced in a portion of the site known as Parcel A between 1950 and 1995. A 1707 catalyst plant was constructed on the western half of Parcel A site in 1942 and operated until 1945. The plant was used to produce a catalyst used in the production of synthetic rubber. The catalyst contained magnesia, potassium carbonate, copper sulfate, and iron sulfate. A phossy pond was in the southeastern portion of Parcel A. The phossy pond was constructed in the 1950's and its use ended in 1976. The pond measured approximately 180'x100' and was 3 to 4 feet deep. An asphalt pad is present on Parcel A, the pad previously supported an acid storage area. Parcel D contained a parking lot and a maintenance and storage building, no manufacturing operations took place on Parcel D. Parcel D contained a TKPP pond between 1972 to 1982. The pond contained activated carbon and backwash slurry. On the portion of Parcel B contained a former hazardous waste storage area. Previous development in the portion of Parcel B included in the site is evident with several concrete slabs-on-grade associated with previous buildings, asphalt concrete paving and one remaining building.

In general, the topography of the site is relatively flat. Surface elevations are between approximately Elevation 9 feet and 12 feet (NGVD29) from west to east across Parcels B and A. There is also a 15' high stockpile located on Parcel A. This is the north end of a bedrock ridge present on the Cargill site to the south. A former rail spurs leading to a former barge canal loading area in the southern area of Parcel C also form elevated features relative to nearby land. Surface elevations are between approximately Elevation 10 feet and 6 feet (NGVD29) from west to east across the site. At present, the vacant areas of the site are covered by low grasses and weeds.

SUBSURFACE CONDITIONS
FIELD EXPLORATION

THIS INVESTIGATION

The scope of this investigation did not include subsurface exploration due to site access restrictions.

AREA GEOLOGY AND SOILS

Fill soils cover the site. Geologic deposits below the fill consist of Holocene Basin deposits. Basin Deposits are silty clay to clay deposits found at the distal edge of alluvial fans adjacent to the Bay Mud.

Site reconnaissance of the area of the site does not indicate the presence of bedrock on the site. However, bedrock was encountered at shallow depths at the site. The shallow bedrock appears to be continuous with two areas of bedrock (North Hill and South Hill) immediately south of the site on the Cargill Salt property. These two bedrock hills, which are in line with the Coyote Hills, located about 3,600 feet northwest of the site, were previously investigated by BSA and BGC. The Coyote Hills are shown on the Preliminary Geologic Map Emphasizing Bedrock (Graymer, et. al., 1996). The Coyote Hills are mapped as consisting of Undivided Franciscan rocks, chert, greenstone, limestone and serpentinite.

With respect to the two bedrock hills south of the site, previous investigations of those hills by BSA and BGC indicated that the North Hill is composed of sandstone and claystone and is mantled with undocumented fill. The North Hill, including the area at the north end of the ridge extending into the FMC site, was partially covered with magnesia from salt production operations, which is reported to have been removed from the site. The South Hill is composed of serpentinite.

The shallow bedrock logged by BSA on the site consisted of slightly weathered to competent siltstone and sandstone of the Franciscan Assemblage. ERM logged weathered serpentine, consistent with Franciscan Assemblage bedrock, in their soil boring D2-A and test pit TP-5W at a depth of about 9 feet bgs.

The site is blanketed by a layer of fill generally ranging in thickness from about 2 to 5 feet. Deeper fills, on the order of about 8 feet deep, are present in areas where clearing of past structures, and environmental investigation and remediation activities have been performed. The surficial fills in the western portion of the site are predominately silty to clayey gravels or sands in the upper 2 to 3 feet. The surface soils in the eastern portion of the site are predominately

clays and silts. The fill contains crushed rock, concrete, and brick in several areas. ERM reported encountering compacted construction debris containing crushed concrete, concrete block, brick, and wood with fragments of metal beams and pipes in the central portion of the western area (Parcel C) of the site. Intact concrete footings were also found at depths between 2 and 4 feet bgs on the western side of the site. They also reported finding a buried concrete structure at a former bittern pond, which extended to a depth of about 8 feet below grade, in the vicinity of our boring B-7.

The alluvial soils underlying the fill consists of varying layers of lean silty to sandy clays, clayey to sandy silts, sand, and silty to clayey sands. The sandy layers were generally encountered between about 8 and 18 feet bgs, with sand deposits also encountered below about 38 feet in two of the four CPTs that extended to depths of at least 50 feet bgs. The granular soils are loose to medium dense, where present in the upper 10 to 20 feet of the site and medium dense to dense below. The fine-grained soils range in consistency from medium stiff to very stiff.

More detailed subsurface information is contained in the CPT graphs in Appendix A and the Boring Logs in Appendix B.

GROUNDWATER

The groundwater map from the California Geological Survey's Seismic Hazard Zone Report 090 for Newark 7.5-Minute Quadrangle (CGS, 2003) indicates historically-high groundwater at a depth of approximately 5 feet. Groundwater was encountered in 7 of the 14 borings drilled for prior investigations. Groundwater was first encountered as shallow as 4-1/2 feet bgs and as deep as 15 feet bgs. Four of the 7 borings where groundwater was not encountered were located in areas of shallow bedrock. These borings were grouted immediately after the completion of drilling and soil sampling. The short period of time that these borings were left open was inadequate for groundwater to seep in and stabilize. ERM reported groundwater depths below the ground surface varying from 4 to 8 feet. Actual groundwater conditions may vary depending on factors such as tidal fluctuations, seasonal rainfall, time of the year, water level in the adjacent Cargill Salt ponds and local irrigation practices.

GEOLOGIC HAZARDS

SURFACE FAULT RUPTURE POTENTIAL

According to published mapping by the California Geological Survey (CGS), no known fault traces cross the site. The site is not located within a designated State of California Alquist-Priolo Earthquake Fault Zone for active faults. It is our opinion that the potential for fault rupture at the site is very low.

SEISMIC GROUND SHAKING

The site is located in a region of high seismicity. There are several major faults within the greater San Francisco Bay Area that are capable of causing significant ground shaking at the site. The most notable of these are the Hayward, Calaveras and San Andreas faults. The site will likely be subject to at least one moderate to severe earthquake and associated seismic shaking during the useful life of the planned development, as well as periodic slight to moderate earthquakes. The probability of one or more earthquakes of magnitude 6.7 (Richter scale) or higher occurring in the San Francisco Bay Area is evaluated by the Working Group on California Earthquake Probabilities on a periodic basis, as are the probabilities of earthquakes of varying magnitudes on each of the major faults. The faults with the greater probability of a moment magnitude of 6.7 or higher earthquake between 2014 and 2044 are the Hayward fault at 14.3 percent, the Calaveras fault at 7.4 percent and the San Andreas fault at 6.4 percent.

According to the U.S. Geologic Survey, the calculated peak ground acceleration (PGA) in the vicinity of the site using current seismic models and building code provisions is 0.53 g. Some degree of structural damage due to strong seismic shaking should be expected at the site, but the risk can be reduced through adherence to seismic design codes.

SEISMIC HAZARD ZONES IN CALIFORNIA

Seismic Hazard Zone Maps are produced by the California Geologic Survey. The maps identify areas where soil liquefaction and earthquake-induced landslides are most likely to occur. Review of the Seismic Hazards Zones map for the Newark Quadrangle (CGS, 2003) shows the site to be in an area with historic occurrence of liquefaction or having the potential to undergo liquefaction based on geologic, geotechnical and/or groundwater conditions at the site. The potential for liquefaction is moderate to high based on the geologic deposits mapped at the site. The site is located within a State-designated Zone of Required Investigation for liquefaction.

Liquefaction

Liquefaction is a temporary transformation of soil into a viscous liquid during strong to violent ground shaking from a major earthquake. Historically, the potential for liquefaction has been associated with a saturated, cohesionless soil such as sands and silty sands. Current practice in liquefaction evaluation now includes sands, silty sands and gravels, as well as silts and even some clay soils. While fine-grained soil (clays and silts) may not undergo complete liquefaction, these soils may be susceptible to cyclic softening. Liquefaction and cyclic softening both result in reduced shear strength. The loss of strength in both granular and fine-grained soils is a result of cyclically induced stresses which cause increased pore pressures within the soil matrix. Primary factors affecting the potential for a soil to undergo liquefaction include: depth to groundwater, soil type, relative density of granular soils, moisture content and Plasticity Index of fine-grained soils, initial confining (overburden) pressure, and intensity and duration of ground shaking. The impact of liquefaction to surface structures is generally limited to soils located within about 50 feet of the ground surface.

Seismic-induced liquefaction can cause loss of or reduced support for foundations, ground-surface disruption due to settlement within sandy liquefiable layers as pore pressures dissipate, and/or flow failures in sloping ground or where open faces are present (lateral spreading) (NCEER 1998). During a major earthquake, buildings, structures, roadways and utilities underlain by potentially liquefiable soil may experience differential settlement through reconsolidation of the liquefied soil.

The liquefaction potential of the site was investigated with cone penetration tests supplemented with hollow-stem auger borings. The CPT data from this investigation and CPT data for the BSA and Berlogar Geotechnical Consultants (BGC) investigations on the adjacent Cargill site (BSA, 2012; BGC, 2010) was analyzed using the software CLiq (version 1.7.4.34). CLiq was developed by GeoLogismiki, specifically for use in analyzing CPT data in accordance with the recognized procedures based on the current state of practice for liquefaction analysis. The software also addresses cyclic softening in clay-like soils. Liquefaction analyses were performed using the CPT-based evaluation procedures as described in Idriss and Boulanger (2008): "Soil Liquefaction During Earthquakes, Monograph MNO-12, Earthquake Engineering Research Institute." We analyzed the liquefaction potential using a groundwater level of 5 feet below the ground surface, which corresponds to the mapped historic high groundwater level. An earthquake magnitude, M_W, of 6.8, which represents the earthquake magnitude with a 10 percent probability of exceedance in 50 years, and a peak ground acceleration of 0.50 g (2016 CBC Design Basis Earthquake) were used in the analysis.

The liquefaction calculation results indicate that the sand, silty sand and sandy silt layers at this site have a moderate to high potential to liquefy during the design earthquake. Liquefaction could result in ground failure and loss of bearing capacity for shallow foundations, and could

contribute to ground subsidence and structure settlement. Effects of liquefaction at the site are expected to be ground surface settlement (subsidence) and structure settlement due to consolidation of the liquefied layers and potential ground-surface disruption caused by sand boils and ground cracking. These effects are discussed in more detail below.

Liquefaction-Induced Settlement

Methods of evaluation of free field site settlement as a result of pore pressure dissipation continue to evolve. There are a number of publications by researchers addressing the issue of liquefaction of fine-grained soils and the settlement potential of these soils as a result of pore pressure dissipation. Soil borings were conducted adjacent to CPTs to sample soils at targeted locations based on the CPT analyses, for use in laboratory testing and soil classification purposes, as well as the evaluation of the settlement potential of liquefiable fine-grained soils. Our liquefaction analysis results indicate that the total liquefaction-induced settlement in the Parcel B areas of the site is on the order of 1 to 4 inches. Settlement is anticipated to occur within sand deposits present between 8 and 18 feet bgs and deeper sand deposits encountered at a depth of about 38 to 40 feet bgs.

Cyclic Softening of Fine-Grained Soils

Given the information developed over the past several years, it is reasonable to conclude that the clays and stiff to very stiff clayey silts encountered are not liquefiable. Where very high soil moisture contents are present and soils identified through CPT testing as soil behavior types including clay & silty clay, and sandy silt/silty sand, the soils may be susceptible to cyclic softening or strength reduction. However, with the use of post-tensioned concrete slab-on-grade foundations, it is our opinion that the temporary softening of these soils is not expected to have a significant impact on the proposed structures.

Lateral Spreading

Lateral spreading is a potential hazard associated with liquefaction. This phenomenon occurs when a subsurface soil layer liquefies and the upper non-liquefiable crust slides down gradient as large blocks over the liquefied soil (such as a descending slope, an incised river channel or open body of water), creating extensional ground cracking or fissures. Lateral spreading can also occur on relatively flat sites (with very gentle slopes) where the underlying liquefied soil rests on a sloping surface. Our analysis of the soil profile at CPT-01, in the southwest area of the site, adjacent to the wetlands indicates that the liquefiable sands are present beginning at about Elevation -2.5 feet. The surface elevation in the wetlands area is between 3.8 and 4 feet. Based on our evaluation there is a low to moderate potential for lateral spreading to occur and to affect development in this area of the site. Lateral spreading on the order of 8 inches may occur. Strengthened foundations capable of resisting some ground distortion, such as post-tensioned

concrete slab-on-grades will need to be considered. Ground improvement may also be required due to the combined effects of seismic settlement in this area, estimated at 4 inches, along with the potential lateral displacement.

Ground-Surface Disruption Potential

Liquefaction-induced ground-surface disruption or sand boils occur when the sudden increase in pore water pressure in a layer of saturated, clean, loose sand or silty sand results in sufficient water pressure to break through the overlying soil mantle with venting to the ground surface. When this occurs, the liquefied sand blows out through the rupture, which is referred to as ejecta, resulting in ground-surface disruption. The occurrence of ground-surface disruption can result in temporary loss of or diminished support for foundations, and increased differential settlement of structures on shallow foundations. Where structures are founded on shallow foundations with integral concrete slabs-on-grade floors, or mat-slab concrete foundations, increased settlement typically occurs at the building perimeter where supporting soils are displaced from below the foundation. The occurrence of ground-surface disruption could also potentially impact underground utilities and roadways.

Based on work by Ishihara (1985) and Youd and Garris (1995), a capping layer of non-liquefiable material over a liquefiable layer should have a ratio of capping layer thickness to liquefiable layer thickness of about 2:1 to prevent the occurrence of ground-surface disruption. We evaluated the site data based on the empirical relationships developed by Ishihara, and Youd and Garris, and found that there is a potential for ground-surface disruption to occur in the western area of the site adjacent to the wetlands area (Area R1 on Plate 3), in the northeast area of Parcel B (Area R2 on Plate 3), and in the eastern area of the site at the east side of Parcel I (Area R3 on Plate 3). The potential is judged to be moderate in Areas R1 and R3, and high in Area R2. Further evaluation of the ground-surface rupture potential of these areas during the design level geotechnical investigation is recommended.

Seismic-Induced Settlement of Unsaturated Sands

Strong ground shaking associated with seismic activity can cause settlement or densification of unsaturated sands and loose fill. The potential impact of seismic-induced settlement of sands or fills above the groundwater is settlement of the ground surface and structures supported on shallow foundations on the site. Loose sands are generally not present within the upper 5 feet of the site. Where they were encountered the layers are relatively thin. Based on our assessment it is our opinion that settlement of the sand deposits would be on the order of 1 inch or less under severe seismic shaking.

PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS

GENERAL

From a geotechnical engineering standpoint, we believe the proposed redevelopment of the site with a residential development is generally feasible. However, several site conditions identified during this investigation will need to be addressed in a design-level geotechnical investigation, and subsequent design and construction phases of site redevelopment. The main geotechnical issues that would impact the project are presented below.

It should be noted that the preliminary conclusions and recommendations are intended to assist in feasibility evaluation and planning efforts for a conceptual project. These preliminary conclusions and recommendations are insufficient for the design of the proposed residential development at this site, and a design-level geotechnical investigation, including field exploration and laboratory testing, will be required. The preliminary conclusions and recommendations contained in this report are subject to modification, depending on the findings from the design-level geotechnical investigation.

The primary geotechnical considerations in redevelopment of the site are:

- Potential for liquefaction-induced settlement
- Potential for liquefaction-induced ground-surface disruption
- Undocumented fill and buried debris
- Expansive soils
- Shallow groundwater
- Corrosive soils

MITIGATION OF LIQUEFACTION-INDUCED IMPACTS ON BUILDINGS

As discussed above, liquefiable soils have been identified at the site. Based on our liquefaction analysis, we estimate that liquefaction-induced free field settlement will range from about 1 to 4 inches. Additional settlements, both for total and differential settlement, are possible should lateral spreading occur and with the occurrence of ground-surface disruption or rupture with sand boils. The potential for lateral spreading to occur is limited to the south side of the site adjacent to the wetlands.

Where total seismic-induced settlement potential is 4 inches or less, seismic-induced differential settlement is estimated to be 2 inches or less across individual single-family detached residential structures. The primary concern with liquefaction-induced settlement is differential settlement, not total settlement. Where total settlement is not expected to exceed 4 inches, and where ground-surface disruption potential is not a concern (as discussed below) mitigation of liquefaction-induced settlement through ground improvement is not required though “structural

mitigation" (CGS SP-117A) is needed. Similarly, with the maximum calculated lateral displacement at 8 inches, ground improvement for lateral spreading is not required; however, "structural mitigation" (CGS SP-117A) would be needed. Structural mitigation should, at a minimum, include the use of relatively stiff structural concrete slab-on-grade foundations, such as a post-tensioned concrete slabs-on-grade. Structural mitigation could potentially be achieved by designing the foundations to resist the effects of liquefaction-induced differential settlement and possibly strengthening connections within the structure.

The potential for ground-surface disruption and the associated potential for increased settlement should be mitigated. Where seismic-induced settlement potential exceeds 4 inches, mitigation beyond the use of a stiff structural slab-on-grade foundation designed to resist bending should also be considered. There are several options for mitigating the hazards associated with the presence of liquefiable soils, including ground-surface disruption. Mitigation measures can be implemented that address only the ground-surface disruption potential, without addressing the potential for seismic-induced settlement. Mitigation measures can also be undertaken to mitigate ground-surface disruption along with mitigation of the potential for seismic-induced settlement.

The placement of additional fill to create a thicker cap of non-liquefiable soils over the liquefiable deposits below may aid in reducing the potential of ground-surface disruption. If additional fill does not provide the needed cover, additional mitigation measures may be required. Mitigation measures could potentially consist of ground improvement to reduce ground-surface disruption as well as reduce or eliminate liquefaction-induced settlement potential, as discussed below. An alternate to ground improvement may be the construction of geogrid-reinforced soil rafts below the building pads. The geogrid reinforcement provides tensile strength as well as increased shear resistance below the foundation to resist pore pressure build-up and the associated potential for the pressure to cause ground-surface disruption. The geogrid soil raft would act as a barrier to the liquefied soils prohibiting their displacement up through the surface soil mantle. Construction of a geogrid reinforced soil raft will not reduce total or wide-area free-field settlement. The intent of constructing geogrid-reinforced soil rafts below the structures is to reduce differential settlement potential associated with liquefied soil being forced up through the surface soils and being ejected at the ground surface resulting in abrupt ground settlement, particularly at the building perimeters. The use of geogrid-reinforced soil rafts is considered a viable method of mitigating liquefaction-induced impacts on single-family detached structures where total settlement is estimated at a maximum of 4 inches. Where higher total settlement with higher differential settlement potential settlement is estimated, a soil raft may not provide adequate improvement of foundation support. Increased foundation stiffness and/or ground improvement should be implemented. This is particularly true where the buildings consist of multiple attached units. Ground improvement will also need to be considered where the buildings are closer than 15 feet to the limits of the site.

UNDOCUMENTED FILL AND DISTURBED SURFACE SOIL

The upper 2 to 5 feet of the site is mantled with undocumented fill, with locally deeper fills where exploratory excavations and site demolition activities have occurred. The undocumented fill consists of general fill placed to raise the site above the tidal influenced zone, to construct a levee along the barge canal, fill placed to backfill holes that resulted from site demolition and clearing activities, and filling of holes associated with exploratory test pits and environmental remediation excavations. A detailed review of the subsurface data from the borings drilled and CPTs performed for this preliminary investigation, and the environmental work performed by ERM, should be performed as part of the design-level geotechnical investigation of the site.

Excavations were made in several locations across the site in the late 1990's to remove below grade obstructions associated with the former industrial plant at the site. The extent of uncontrolled fill, both laterally and vertically are presently unknown. ERM excavated a number of test pits across the site. The test pits will need to be re-excavated and then backfilled with engineered fill unless documentation can be provided that the backfill soils were properly placed and compacted as engineered fill, compacted to not less than 90 percent relative compaction. The test pits were as deep as 9 feet.

With debris encountered in several locations by BSA and ERM, and with limited knowledge regarding previous site clearing activities, further study of the site is recommended. Additional exploration, potentially consisting of site survey using ground penetrating radar and test pits, should be performed as part of a design-level geotechnical investigation. A remedial grading plan should be prepared based on the data collected during review of historic documents through completion of the subsurface exploration during the design-level investigation.

For preliminary budgeting purposes, we recommend that the upper 3 feet of the site in areas previously occupied by structures be over-excavated. The bases of the excavations should then be assessed by the Geotechnical Engineer as the grading operation progresses to determine if additional depth of excavation is needed to remove buried debris and uncompacted fill soils. Deeper over-excavation will be needed in the areas of some exploratory tests pits and site clearing activities where excavations were made to depths of as much as 9 feet below the ground surface. The excavated soils, cleared of any debris, over-sized materials (cobbles to boulder size) and hazardous contaminates may be replaced as engineered fill. The depth of over-excavation for wide-area excavation is subject to revision based on additional study of the site.

EXPANSIVE SOILS

Moderately expansive soils were encountered in the surficial soils that blanket the site. Expansive soils can undergo volume change due to swelling and shrinkage with changes in moisture content. With this condition, it is important that foundations and concrete slabs-on-grade be capable of tolerating or resisting potentially damaging soil movements. Post-tensioned concrete slab-on-grade foundations are frequently used for support of residential structures supported by expansive soils. To reduce the potential impacts of swelling and shrinkage of expansive soils on shallow foundations, concrete slab-on-grade floors and exterior concrete flatwork, the on-site soils should be conditioned to a higher moisture content than low-expansive material during site preparation and grading. Presoaking of the building pad subgrades prior to concrete placement may be required. Additionally, placement of low-expansive soils below building floor slabs will aid in mitigating the effects of underlying expansive soils. These types of mitigation measures are typical in the Bay Area since much of the region is underlain by expansive soils. Additional laboratory tests should be performed during the design-level geotechnical investigation to further evaluate the expansion potential of on-site and imported soils. Limitations on the expansion potential of future import fill soils are recommended.

SHALLOW GROUNDWATER

During our field investigation, groundwater was encountered as shallow as 4-1/2 feet below the ground surface and was reported by others to be present within 4 feet of the ground surface. The groundwater at the site may be influenced by tidal fluctuations. Water stops may be needed to prevent tidal groundwater seepage through the bedding and shading material around the utility pipes. The impacts of groundwater should be considered in planning underground improvements and site grading. In areas where deep utilities are planned, dewatering may be required. The contractor should be prepared to accommodate seepage and/or groundwater in excavations either with pumping from sumps (if minor seepage is encountered during excavation) or a dewatering system using well points (if heavy seepage is encountered during excavation). The dewatering system should be designed, installed and operated by an experienced contractor. The contractor should also be aware that grading in low-lying areas (near or below the groundwater table) may need to be stabilized and/or dewatered to facilitate placement of structures and/or compaction of fill. The impact of groundwater should be considered in the detention basin design.

SITE PREPARATION AND ROUGH GRADING

Our preliminary recommendations for site preparation and grading are as follows:

1. The site should be cleared of existing vegetation. Vegetation should be removed by mowing and raking or blading off the vegetation at the ground surface. Any remaining stubble can be disced into the ground. The feasibility of discing versus stripping of the top few inches of the surface soils should be evaluated by the Geotechnical Engineer shortly before grading commences.
2. As discussed above, uncontrolled fills blanket much of the site. The presence of uncontrolled fill should be investigated further during the design-level geotechnical investigation. Abandoned underground utility lines and facilities, pavements, foundations and slabs remaining from the former industrial facility should be removed. Concrete can be broken down into pieces less than 4 inches in maximum dimension and mixed with soil for use as engineered fill for the project. For preliminary planning purposes, we recommend that, as a minimum, the top 3 feet of the site be over-excavated. Where fill soils are present at the 3-foot depth, the depth of excavation should be increased to remove the remaining uncontrolled fill to within 1-foot of the underlying native soils. The excavated soils should be cleared of debris and any contaminates that may be encountered. Uncontrolled fill was placed at 53 test pits excavated by others during previous investigations of the site. Backfill placed at excavations that were made as part of the site environmental remediation activities should be removed. Those areas will need to be over-excavated to remove the loose fill to its full depth.
3. In the event that bedrock is present within 4 feet of finished pad grades, the bedrock areas should be excavated. The bedrock area should be further investigated during a design-level geotechnical investigation so that a remedial grading plan can be developed to address bedrock below foundations or in the areas of deeper utilities.
4. On completion of removal of disturbed soils and uncontrolled fills, and excavation at bedrock areas to provide more uniform soil support for buildings and underground utility construction, the exposed subgrade should be processed as follows:
    - Scarify the top 12 inches of the exposed subgrade, moisture condition and mix until relatively uniform and then compacted.
    - Soils with moderate to low expansion potential (PI of approximately 20 or less) should be moisture conditioned to at least 3 percent above the optimum moisture content and compacted to at least 90 percent relative compaction.
    - Soils with higher expansion potential (PI greater than 20) should be moisture conditioned to at least 5 percent above the optimum moisture content and compacted to between 88 and 92 percent relative compaction.

5. Once the subgrade has been processed, the over-excavated soils cleared of debris and contaminates can be replaced as engineered fill. Engineered fill is defined as soils meeting fill soil requirements for grain size and expansion potential, that is placed and compacted in accordance with the recommendations presented herein under the direction and observation of the Geotechnical Engineer, with compaction tests performed by a representative of the Geotechnical Engineer.

Moderate and High Plasticity Clay soils (PI>20) within 5 feet of finished grade	Between 88 and 92 percent relative compaction at not less than 5 percent above optimum moisture content
Lower Plasticity Clays, Silts and Granular soils, and any fills deeper than 5 feet from finished grade	At least 90 percent relative compaction at not less than 3 percent above optimum moisture content

6. Fill and backfill should be placed in thin lifts. Lift thicknesses are normally 6 to 8 inches, depending on compaction equipment. Thicker lifts, not to exceed 12 inches, may be placed and compacted provided that the grading contractor can demonstrate that compaction is being achieved through the full depth of section.

7. Prior to preparation of finished subgrade for pavements, utility trench backfill in the pavement areas should be properly placed and compacted. Utility trench construction is discussed in detail below. The compacted subgrade should be non-yielding when proof-rolled with a loaded ten-wheel truck, such as a water truck or dump truck, prior to pavement construction. Subgrade soils should be maintained in a moist and compacted condition until covered with the complete pavement section.

8. Class 2 aggregate base should conform to the requirements in Caltrans Standard Specifications Section 26 for ¾-inch maximum aggregate base. Aggregate base for pavements should be placed in a manner to prevent segregation, be uniformly moisture conditioned to at least 2 percent above the optimum moisture content, and compacted to at least 95 percent relative compaction to provide a smooth, unyielding surface.

9. Earthwork observations and soil density tests services should be carried out by a representative of the Geotechnical Engineer during site clearing, grading and backfill operations to assist the contractor in obtaining the required degree of compaction and proper moisture content and to allow for documentation that the project requirements have been met. Where the compaction and/or soil moisture content are outside the range required, additional compaction effort and/or adjustment of moisture content should be made until the specified compaction and moisture conditioning is achieved.

10. ASTM test methods should be used to evaluate the relative compaction of processed subgrade below general fills, general fills, completed subgrade and aggregate base. Relative compaction ("compaction") refers to the in-place dry density of the soil or aggregate base

expressed as a percentage of the maximum dry density for soils and aggregate base tested as determined in the laboratory. In-place dry densities and moisture contents of compacted soils should be determined in accordance with ASTM test method D6938 ("Test Methods for Density of Soil and Soil-Aggregate In-place by Nuclear Methods [Shallow Depth]"). Maximum dry density and optimum moisture content should be determined by ASTM D1557 laboratory compaction test procedure.

MATERIAL FOR FILL

1. The on-site soils are generally suitable for use as engineered fill, provided they are free of debris, significant vegetation, rocks greater than 4 inches in largest dimension and other deleterious matter.

2. Import fill should contain no deleterious matter and rocks greater than 4 inches in largest dimension, and have Plasticity Index (PI) less than 20. Import fill materials should be subject to the evaluation by the Geotechnical Engineer prior to their use. The properties of the soil with respect to corrosivity should also be evaluated.

UTILITY TRENCHES

Groundwater Considerations

As noted above, shallow groundwater is present at the site. At the time of this investigation, groundwater was within about 4-1/2 feet of the ground surface. The impact of groundwater should be considered in design, construction and scheduling. Underground contractors should be prepared to dewater their trenches and may need to stabilize the base of their excavations as discussed below.

Trenches Adjacent to Building Foundations

To maintain the desired support for foundations, utility trenches running parallel or near-parallel to building foundations should be located away from the foundation such that the base of the trench excavation is located above an imaginary plane having an inclination of 1 horizontal to 1 vertical (1H:1V), extending downward from the bottom edge of the foundation toward the trench location. Where trench locations are restricted and must be in close proximity to foundations, footings or slab edges located adjacent to utility trenches should be deepened during the design of the project as necessary so that their bearing surfaces are below an imaginary plane having an inclination of 1H:1V, extending upward from the bottom edge of the adjacent utility trench. As an option to the use of a deepened foundation, the trench can be backfilled with controlled low strength material (CLSM) (sand-cement slurry) unless the use of CLSM is prohibited by the City of Newark or the utility company.

Excavation

All excavations should conform to applicable State and Federal industrial safety requirements. Safety in and around utility trenches is the responsibility of the general and underground contractors. Where necessary, trench excavations should be shored in accordance with current CAL-OSHA requirements.

The walls of trenches extending into the clayey soils will likely stand in vertical cuts in the upper 4 to 5 feet with appropriate shoring, provided proper moisture content in the soils is maintained and that the trench walls are not subjected to vibration or surcharge loads above the excavation. Where weaker soils are encountered in the upper 4 to 5 feet of the site or trenches will extend deeper than 5 feet, trench sidewalls should be sloped no steeper than 1H:1V in stiff cohesive soil, no steeper than 1.5H:1V in moist granular soils and no steeper than 2H:1V in dry granular soils. Flatter trench slopes may be required if seepage is encountered during construction or if exposed soil conditions differ from those encountered in our borings and CPTs. Heavy construction equipment, building materials, excavated soil, and vehicular traffic should not be allowed within 5 feet of the top (edge) of the excavation.

As noted above, groundwater may be encountered during trenching for underground utilities. If trench excavations will extend below the groundwater surface, an unstable base may develop and dewatering may be necessary to allow for pipe placement and backfill compaction. If unstable trench bottom or groundwater conditions are present, it may be necessary to place a nonwoven geotextile filter fabric and a layer of crushed, free-draining open-graded gravel at the bottom of the trench to provide a stable base for laying of the pipe or conduit. The need for a trench bottom stabilization section and the thickness of the section should be determined as the excavation operation progresses. Where free-draining or open-graded gravel is placed in the trench it should be fully wrapped by the filter fabric to prevent migration of finer soils into the open matrix of the gravel.

Backfill

Materials type and placement procedures for utility bedding and shading materials should meet local agency and/or other applicable utility providers' requirements. The City of Newark Standard Details (SD-117-1 and SD-117-2) for trench backfill specify the use of import materials. For trenches outside of the City of Newark jurisdiction, and where not otherwise precluded by the utility company that will be responsible for the trenches after project completion, from a geotechnical perspective, utility trench backfill above the bedding and shading materials may consist of on-site soils that have been processed to remove rock fragments over 4 inches in largest dimension, rubbish, vegetation and other undesirable substances.

Backfill materials should be placed in level lifts about 4 to 12 inches in loose thickness, moisture conditioned and mechanically compacted. Lift thickness will be a function of the type of compaction equipment in use. Thinner lifts (4- to 6-inch lifts) will be required for manually operated equipment, such as wackers or vibratory plates, and thicker lifts possible where a sheepsfoot wheel is used on the stick of an excavator. Jetting should not be used for densification of backfill on this project.

Trench backfill consisting of on-site or imported fine-grained soil (clays and silts) should be moisture conditioned to between 3 and 5 percent above optimum and compacted to at least 90 percent relative. Where sand is used as backfill, it should be moisture conditioned to slightly above the optimum moisture content and compacted to at least 93 percent relative compaction. The upper 12 inches of trench backfill for trenches located in streets should be compacted to at least 95 percent relative compaction. All backfill soils in future street pavement and sidewalk areas under the jurisdiction of the City of Newark should be moisture conditioned to no less than 2 percent above optimum and compacted to no less than 95 percent relative compaction.

CALIFORNIA BUILDING CODE (CBC) SEISMIC DESIGN PARAMETERS

According to Section 20.3.1 of ASCE/SEI 7-10, where soils are vulnerable to potential failure or collapse under seismic loading, such as the liquefiable soils that underlie portions of the site, the site should be classified as Site Class F. ASCE/SEI 7-10 Section 20.2 stipulates that "A site response analysis in accordance with Section 21.1 shall be provided for Site Class F soils, unless the exception to Section 20.3.1 is applicable." Although the site could be classified as Site Class F, requiring a site-specific response analysis, Section 20.3.1 includes the following: "Exception: For structures having fundamental periods of vibration equal to or less than 0.5s, site response analysis is not required to determine spectral accelerations for liquefiable soils. Rather, a site class is permitted to be determined in accordance with Section 20.3 and the corresponding values of Fa and Fv determined from Tables 11.4-1 and 11.4-2." It is our understanding that this exception would apply for the proposed project. This should be confirmed by the Structural Engineer. In the event that the structures will have fundamental periods greater than 0.5 seconds, additional geotechnical analysis, including a site response analysis, will need to be provided.

We are providing the following 2016 California Building Code seismic design criteria from the U.S. Geological Survey Earthquake Hazards Program, U.S. Seismic Design Maps application for determination of Design Ground Motions. The seismic design criteria presented in the table below were determined using the USGS Earthquake Hazards Program. The program is found online at https://earthquake.usgs.gov/hazards/designmaps/. Seismic design parameters were determined with consideration of the 2010 ASCE 7-10 (w/March 2013 errata) publication, site location of latitude: 37.5204 degrees North latitude and 122.0571 degrees West longitude, site class D, and risk category I/II/III.

2016 California Building Code Seismic Design Criteria	
Site Class	D
Mapped MCE_R Spectral Response Acceleration Parameter at Short Period[1], S_s	1.500
Mapped MCE_R Spectral Response Acceleration Parameter at 1-Second Period[3], S_1	0.600
Site Coefficient (Short Period) F_a	1.0
Site Coefficient (1-Second Period) F_v	1.5
Mapped MCE_R Spectral Response Acceleration Parameter at Short Period adjusted for Site Class D, S_{MS}	1.500
Mapped MCE_R Spectral Response Acceleration Parameter at 1-Second Period adjusted for Site Class D, S_{M1}	0.900
Design Spectral Acceleration Parameter, S_{DS}	1.000
Design Spectral Acceleration Parameter, S_{D1}	0.600
Design Response Spectrum Long-Period Transition Period, T_L	12
Seismic Design Category	D
Additional Parameters for Sites with Site Design Categories D through F	
Peak Ground Acceleration, PGA	0.518
Site Coefficient, F_{PGA}	1.000
Peak Ground Acceleration – geometric mean, PGA_M	0.518
Risk Coefficient at 0.2 s Spectral Response Period, C_{RS}	1.079
Risk Coefficient at 1 s Spectral Response Period, C_{R1}	1.043

POST-TENSIONED SLAB FOUNDATIONS

Moderately expansive surficial soils were encountered over portions of the site. With the need for extensive import to raise the site, it is likely that import soil will also be moderately expansive. The presence of the expansive soils will need to be considered in foundation selection and design. Liquefiable soils have also been identified at the site. These soils have the potential to undergo liquefaction-induced settlement. Lateral spreading of the site can also occur should the underlying soils undergo liquefaction. With these conditions, it is important that foundations be capable of tolerating or resisting potentially damaging soil movements. It is our opinion from a geotechnical engineering standpoint that, after the liquefaction mitigation measures have been satisfactorily completed, the proposed buildings can generally be supported on post-tensioned slab foundations constructed on properly prepared subgrade soils.

Post-tensioned foundations should be designed in accordance with the design provisions as presented in the document Design of Post-Tensioned Slabs-On-Ground, third edition, published

[1] For Site Class B, 5% damped. Adjustments for other Site Classes are made, as needed, within the program.

by the Post-Tensioning Institute (PTI), with consideration of Addendums No. 1 and No. 2. With fill soils required at the majority of the lots, PT concrete foundation design parameters should be determined during the rough grading phase of the project. For preliminary planning, foundations on the order of 10 to 12 inches thick should be considered for single-family detached and smaller multi-unit buildings. Where larger buildings with four or more units are planned, foundation thickness may be on the order of 12 to 14 inches.

CORROSION CONSIDERATIONS

Soils in the area are known to be moderately to severely corrosive due to high chloride ion concentrations, which is sufficient to attack steel embedded in a concrete mortar coating, and high sulfate ion concentrations, which is corrosive to concrete in contact with the ground. Testing of the on-site soils and import soils should be performed during rough grading of the site for determination of chloride and sulfate ion concentrations, as well as soil resistivity values, for use in design of concrete structures and underground utilities.

LIMITATIONS

The conclusions and preliminary recommendations presented in this report are based upon the project information provided to us by The Willow Project Owner, LLC, information obtained from published geologic reports and maps, unpublished geotechnical reports and professional judgment.

It is not warranted that such information, interpretation of the data, and the conclusions and preliminary recommendations based on the interpretation of that data, will not be superseded by future Geotechnical Engineering developments. In addition to advancements in the field of Geotechnical Engineering, the International Building Code and the California Building Code are revised periodically. Those revisions can impact interpretation of subsurface soil conditions and regional seismicity.

The conclusions and preliminary recommendations presented herein were developed based on the data from studies previously conducted on adjacent and nearby site. With the complex geology at the site and past development history, it is important that a design-level geotechnical investigation be performed to investigate the liquefaction-induced settlement and ground-surface disruption potential at the site. Subsurface exploration will also aid in the development of a remedial grading plan to address uncontrolled fills and disturbed soils on the site.

The recommendations presented herein are subject to modification or revisions based on the data obtained and the engineering analyses performed during the recommended design level geotechnical investigation.

This due diligence geotechnical investigation has been conducted, and the opinions, conclusions and preliminary recommendations presented in this report were developed in accordance with accepted Geotechnical Engineering practices that exist in the San Francisco Bay Area at the time this report was prepared. No warranty, expressed or implied, is offered, inferred or made, by or through our performance of professional services.

The information provided herein was developed for use by The Willow Project Owner, LLC as part of a due diligence effort for the project as described herein. In the event that changes in the nature, design or location of the proposed project are planned, or revisions are made to the Building Code that are related to Geotechnical Engineering, the conclusions and preliminary recommendations in this report shall be considered invalid, unless the changes are reviewed and the conclusions and recommendations are confirmed or modified in writing by BSA. In light of this, there is a practical limit to the usefulness of this report without critical review. Although the time limit for this review is strictly arbitrary, it is suggested that two years from the date of this report be considered a reasonable time for the usefulness of this report.

Please contact the undersigned if you have any questions regarding the contents of this report.

Respectfully submitted,

BERLOGAR STEVENS & ASSOCIATES



Frank Berlogar
Principal Engineer
RCE 20383

FB:mc

Attachments:

References
Plate 1 – Vicinity Map
Plate 2 – Site Plan

Appendix A – CPT Graphs
Appendix B – Boring Logs
Appendix C – BGC CPT Graphs and Boring Logs
Appendix D – Laboratory Test Results

Copies: Addressee

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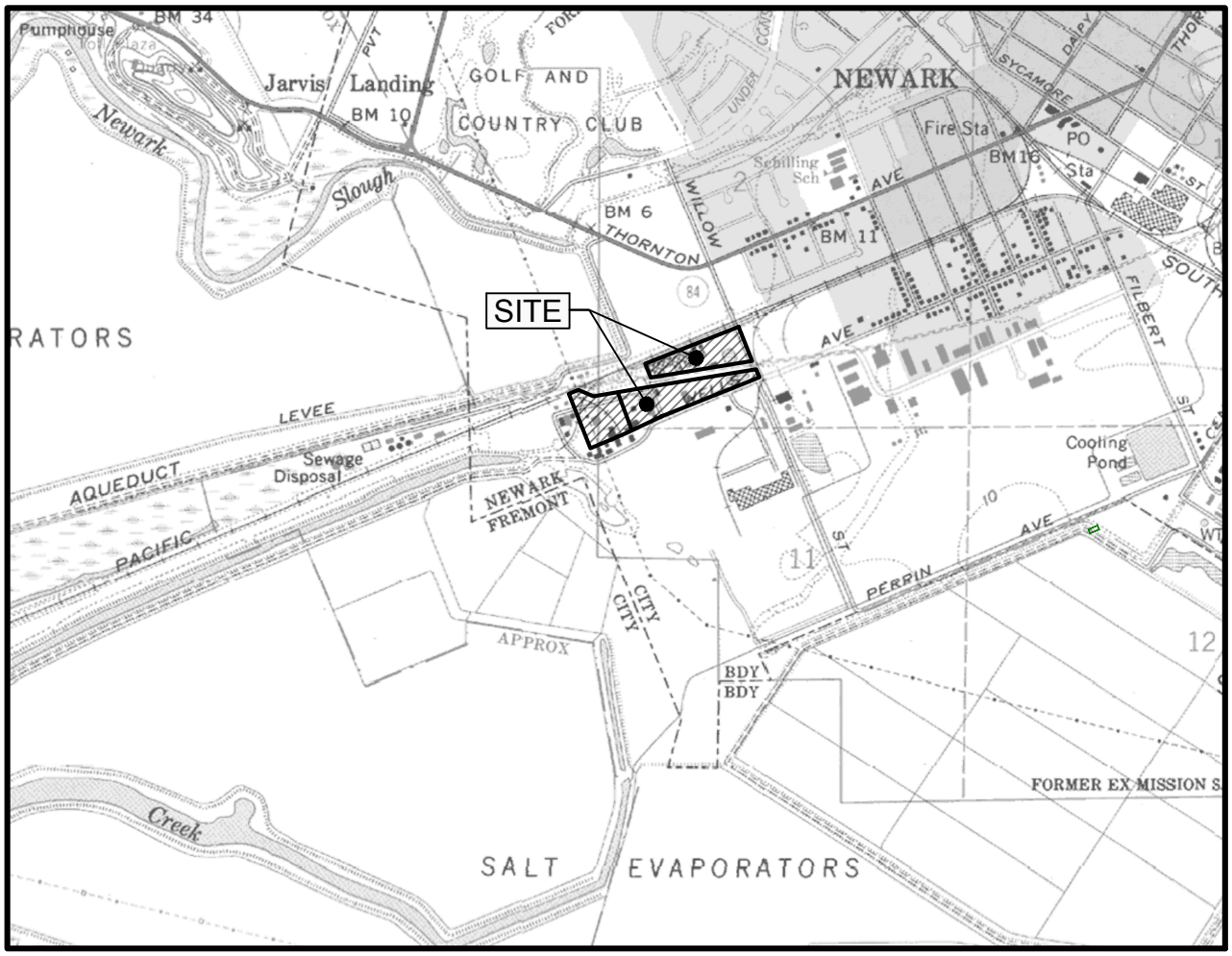
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PLATES

JOB NUMBER: 3983.100 DATE: 5-4-20 BY: CC



VICINITY MAP

FMC WILLOW PARCEL
ENTERPRISE DRIVE
NEWARK, CALIFORNIA
FOR
THE WILLOW PROJECT OWNER, LLC
(INTEGRAL COMMUNITIES)

BASE: PORTION OF U.S.G.S. 7.5 MINUTE TOPOGRAPHIC QUADRANGLE,
NEWARK, CALIFORNIA, AT A SCALE OF 1:24,000.

PLATE 1

JOB NUMBER: 3983.100 DATE: 5-4-20 DRAWN BY: CC

PARK REDEVELOPMENT AREA PORTION OF PARCEL B

WILLOW REDEVELOPMENT AREA PARCEL A

WILLOW REDEVELOPMENT AREA PARCEL D, PORTION OF PARCEL B

ENTERPRISE DRIVE

EXPLANATION

- WILLOW REDEVELOPMENT AREA
- B-14 — BORING LOCATION (BSA, 2017)
- CPT-6 — CPT LOCATION (BSA, 2017)
- B-2 — APPROXIMATE BORING LOCATION (BSA, 2012)
- CPT 2011-09 — APPROXIMATE CONE PENETRATION TEST LOCATION (BSA, 2012)
- CPT 2010-03 — APPROXIMATE CONE PENETRATION TEST LOCATION (BGC, 2010)
- FMC-DG-343 — APPROXIMATE BORING LOCATION (FMC, 2017)
- MH-66 — APPROXIMATE BORING LOCATION (MCLAREN HART INC., 1999)
- SB-20 — APPROXIMATE BORING LOCATION (PES ENVIRONMENTAL, 1997)
- EXCAVATED AREAS (ERM, 2017)

0 30 60 120
SCALE: 1"=60'

SITE PLAN

FMC WILLOW PARCEL

ENTERPRISE DRIVE
NEWARK, CALIFORNIA
FOR
THE WILLOW PROJECT OWNER, LLC
(INTEGRAL COMMUNITIES)

Berlogar Stevens & Associates
SOIL ENGINEERS * ENGINEERING GEOLOGISTS

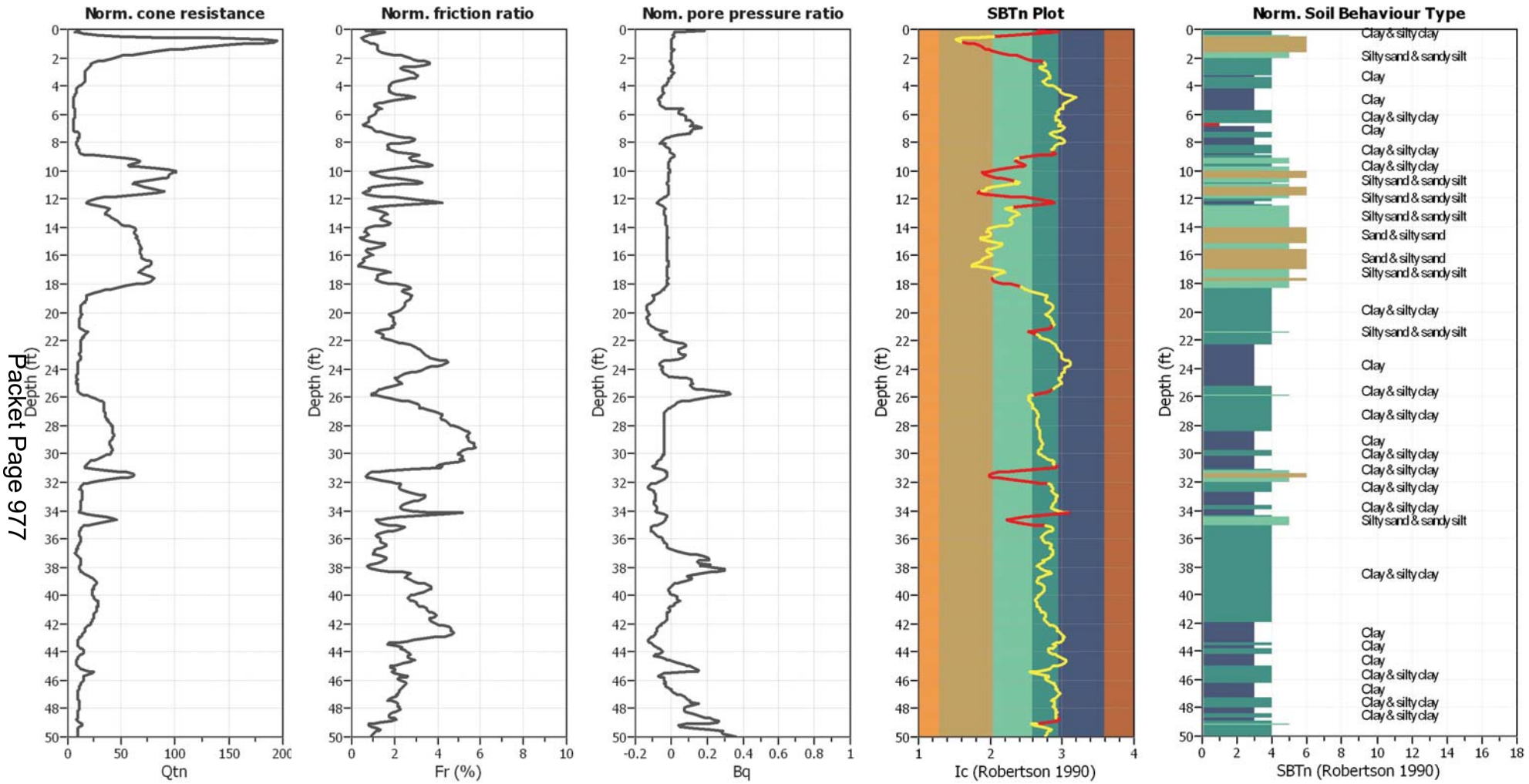
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PLATE 2

APPENDIX A

CPT Graphs

CPT basic interpretation plots (normalized)



Packet Page 977

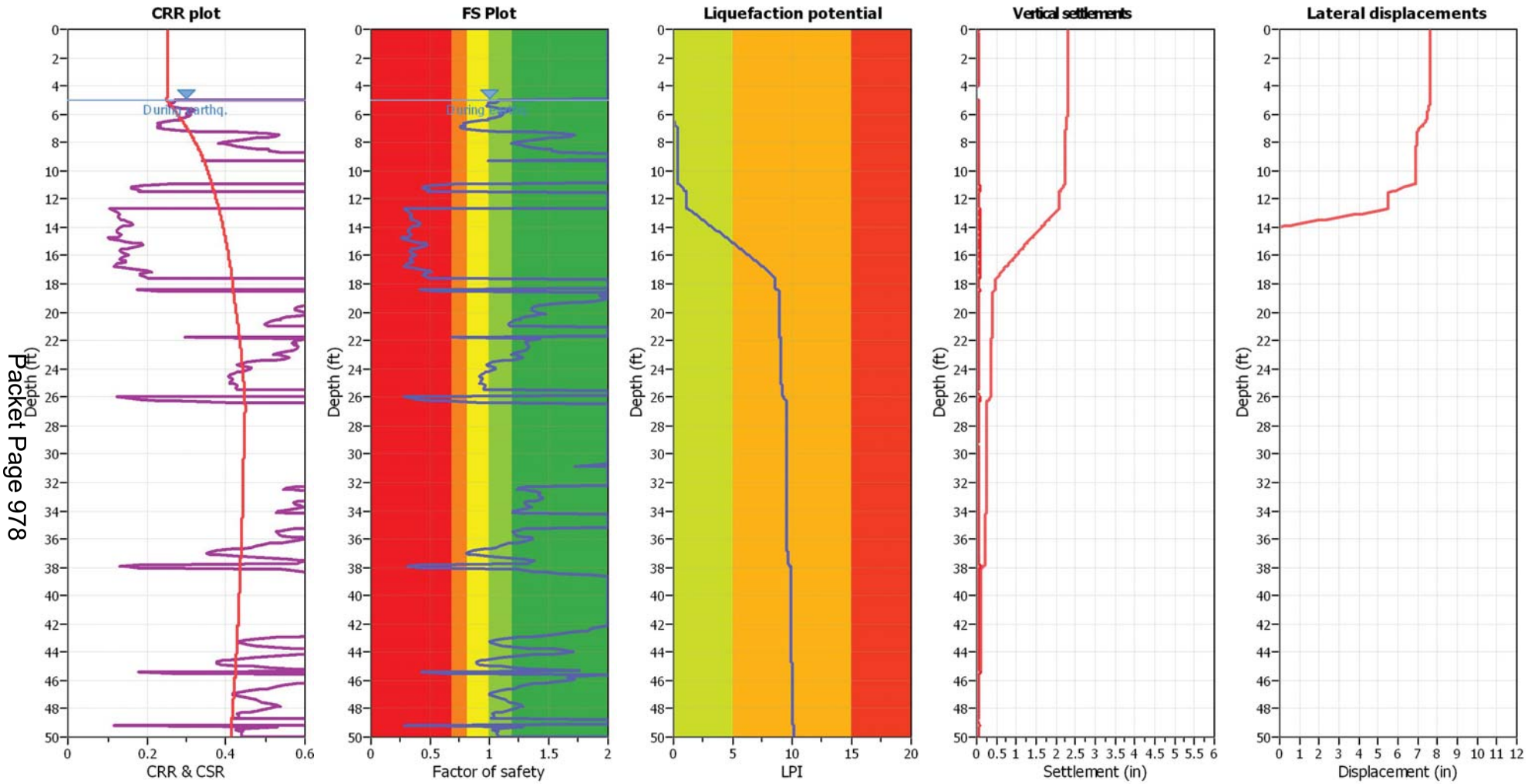
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Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Packet Page 978

Input parameters and analysis data

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Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

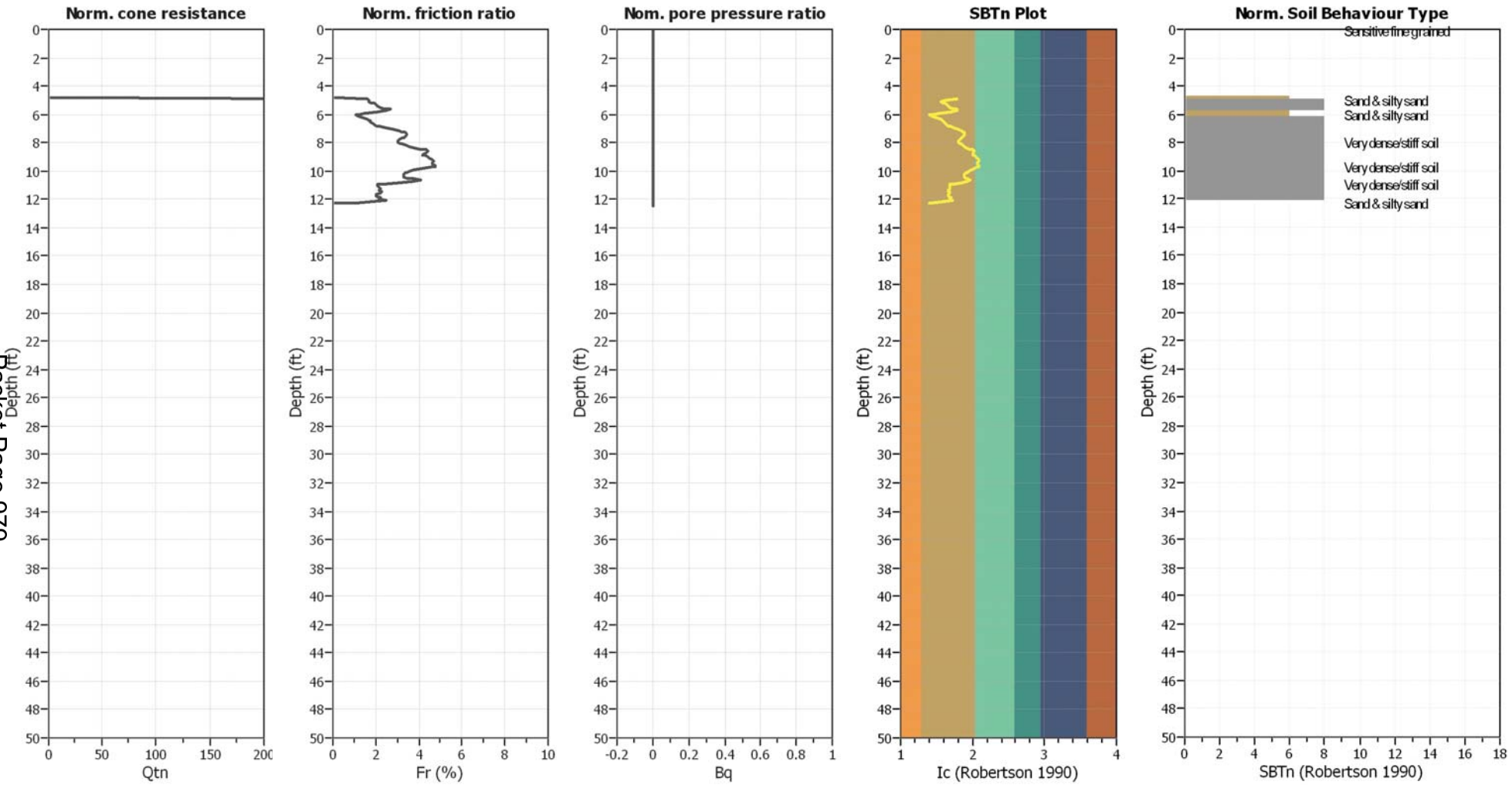
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

CPT basic interpretation plots (normalized)



Packet Page 979

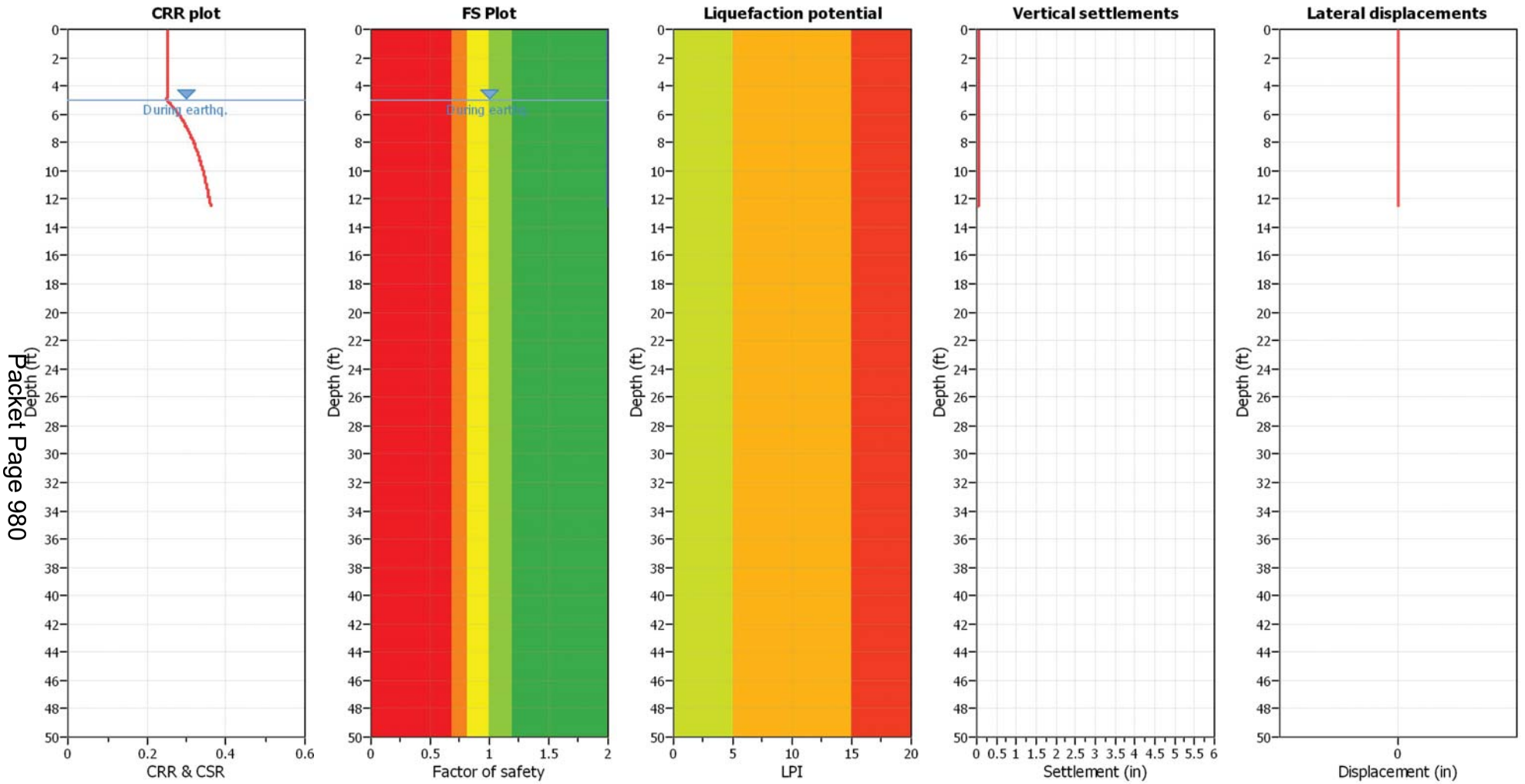
Input parameters and analysis data

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Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Packet Page 980

Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

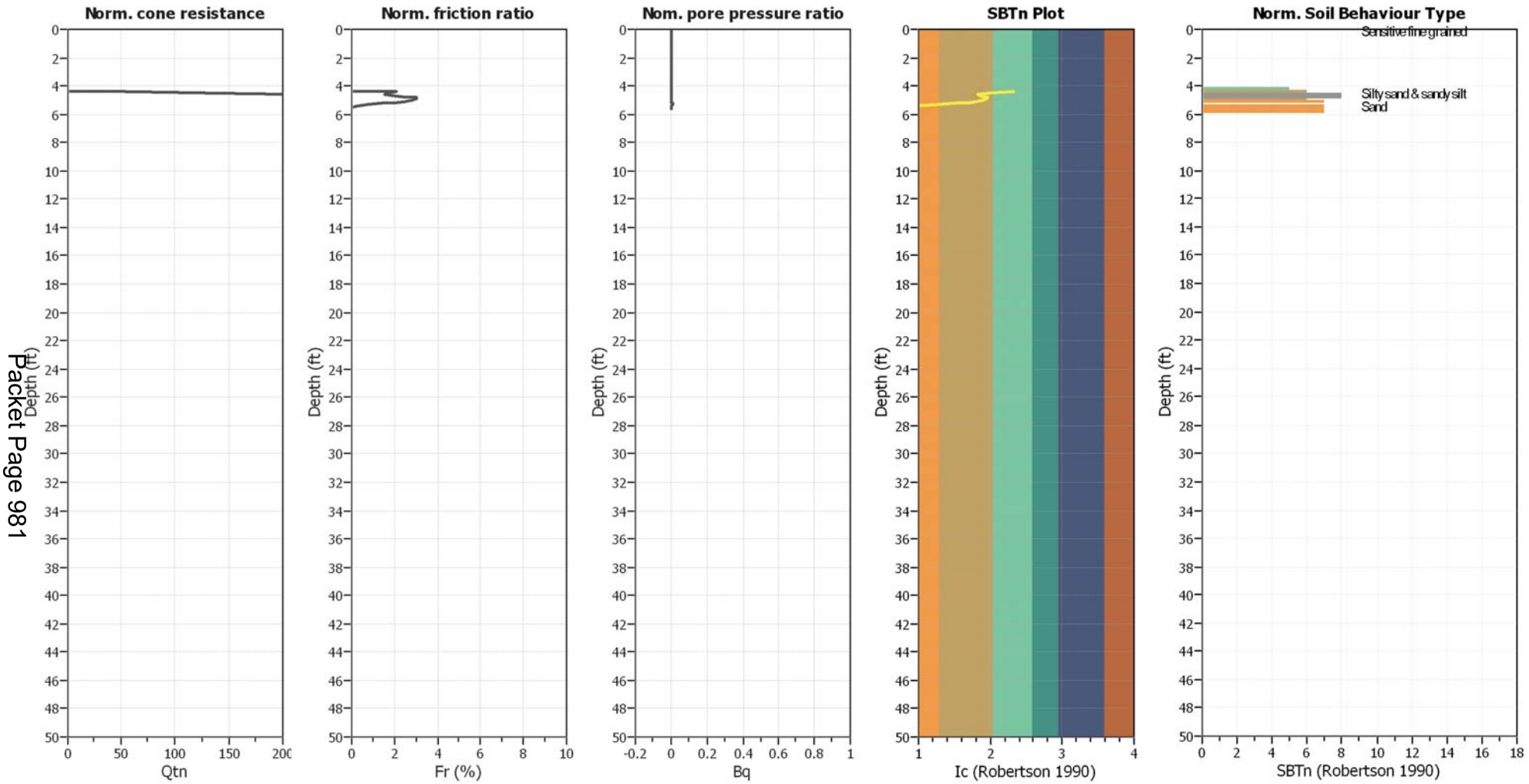
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

CPT basic interpretation plots (normalized)



Input parameters and analysis data

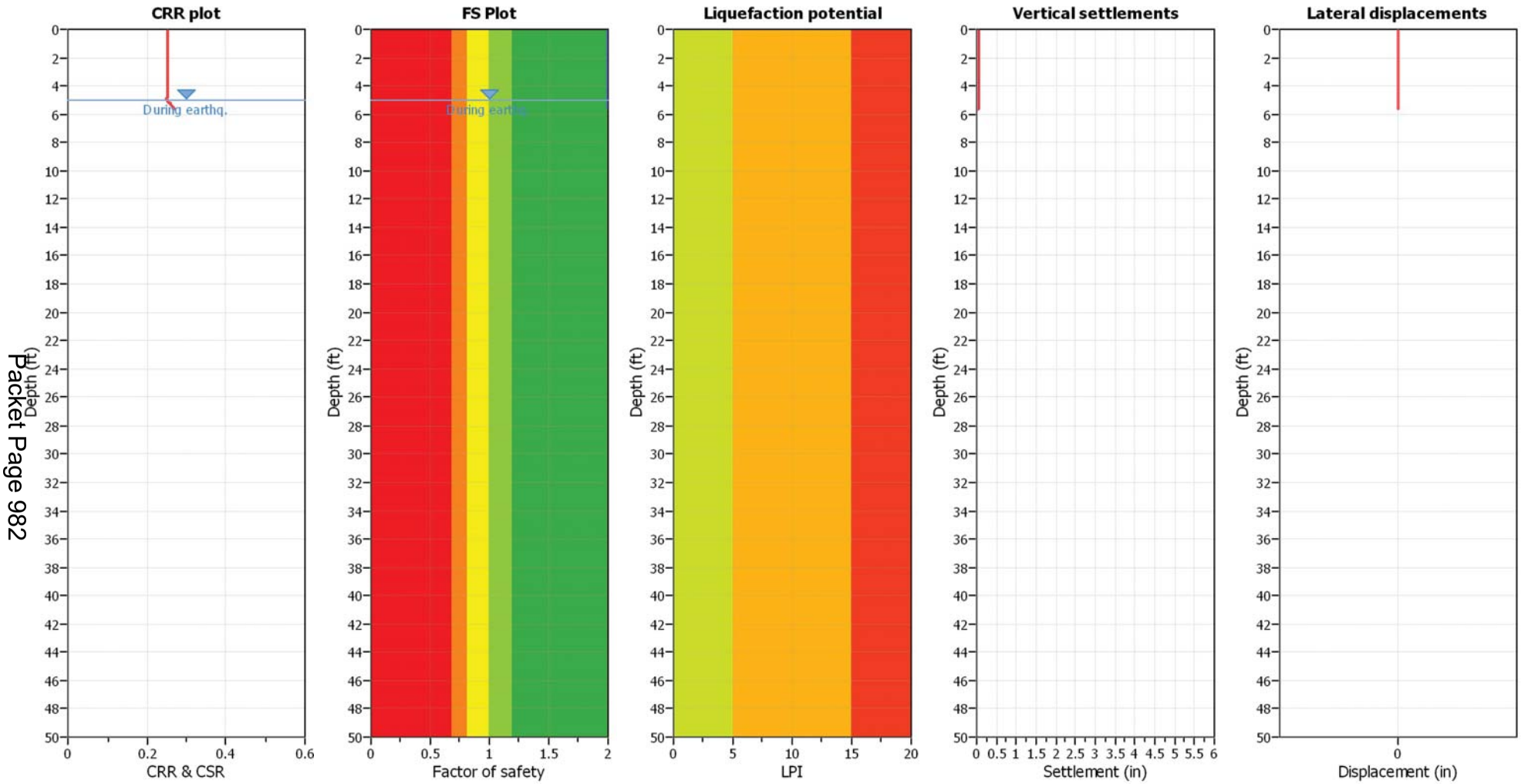
Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Packet Page 981

Liquefaction analysis overall plots



Packet Page 982

Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

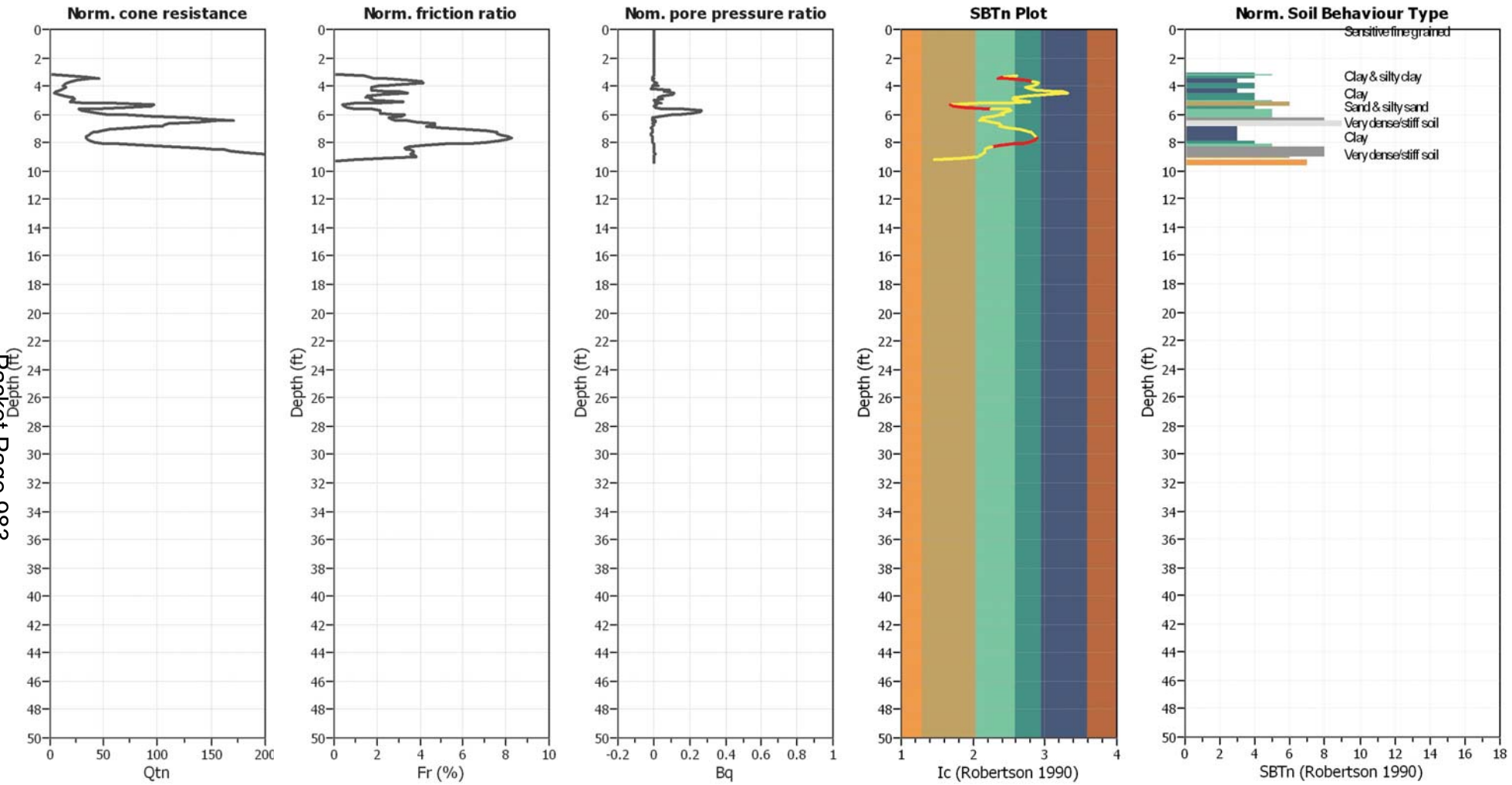
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

CPT basic interpretation plots (normalized)



Packet Page 983

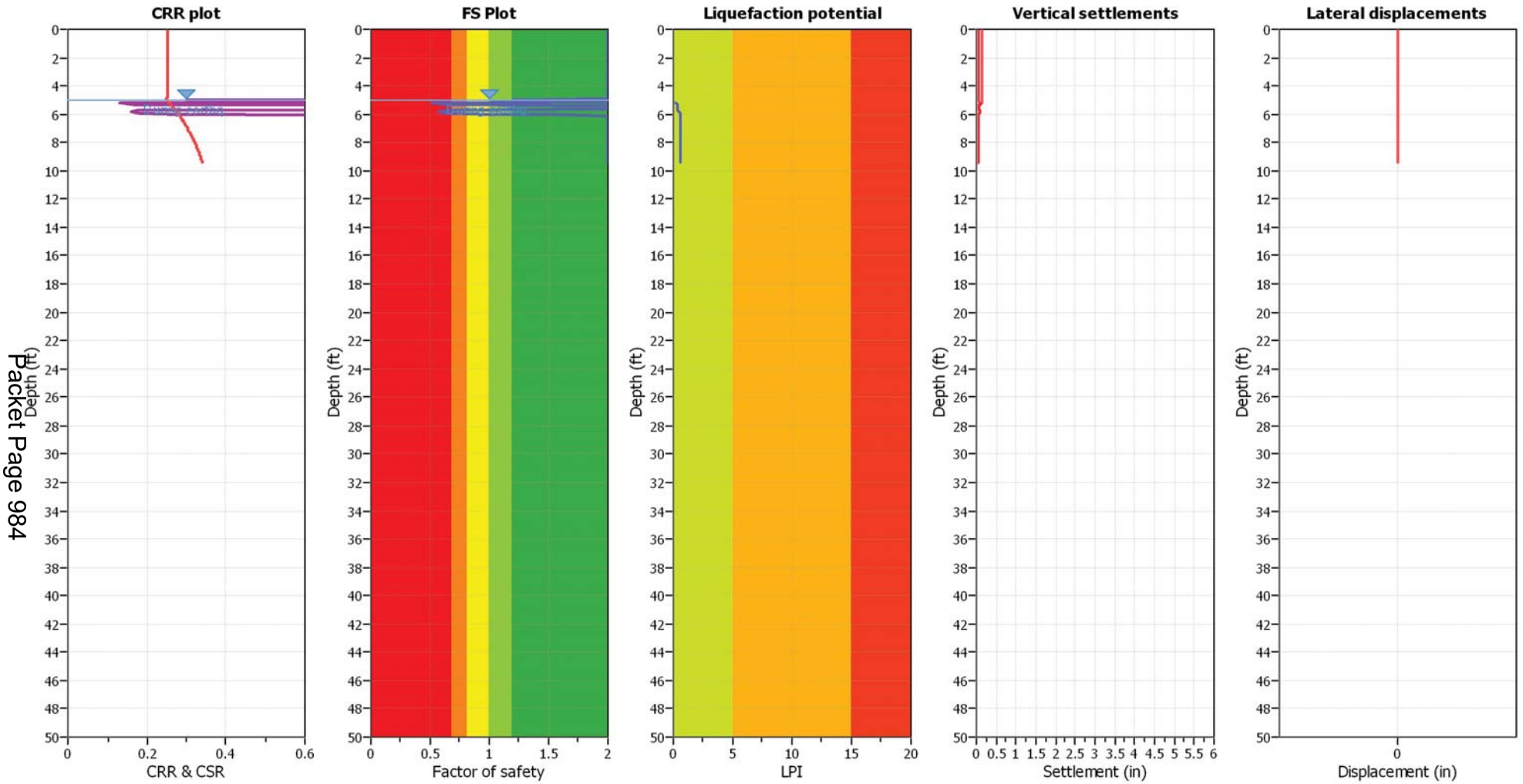
Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

F.S. color scheme

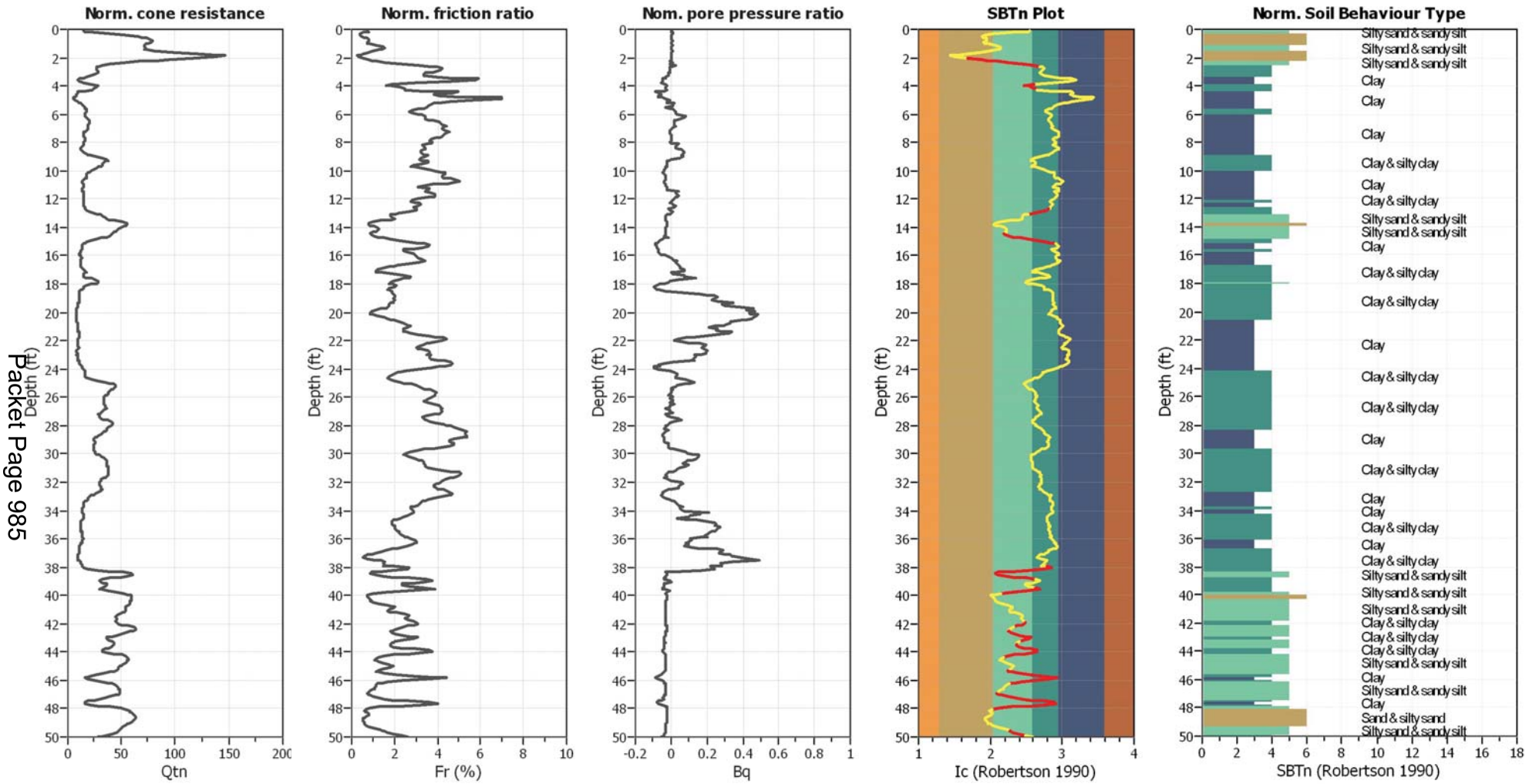
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Packet Page 984

CPT basic interpretation plots (normalized)



Packet Page 985

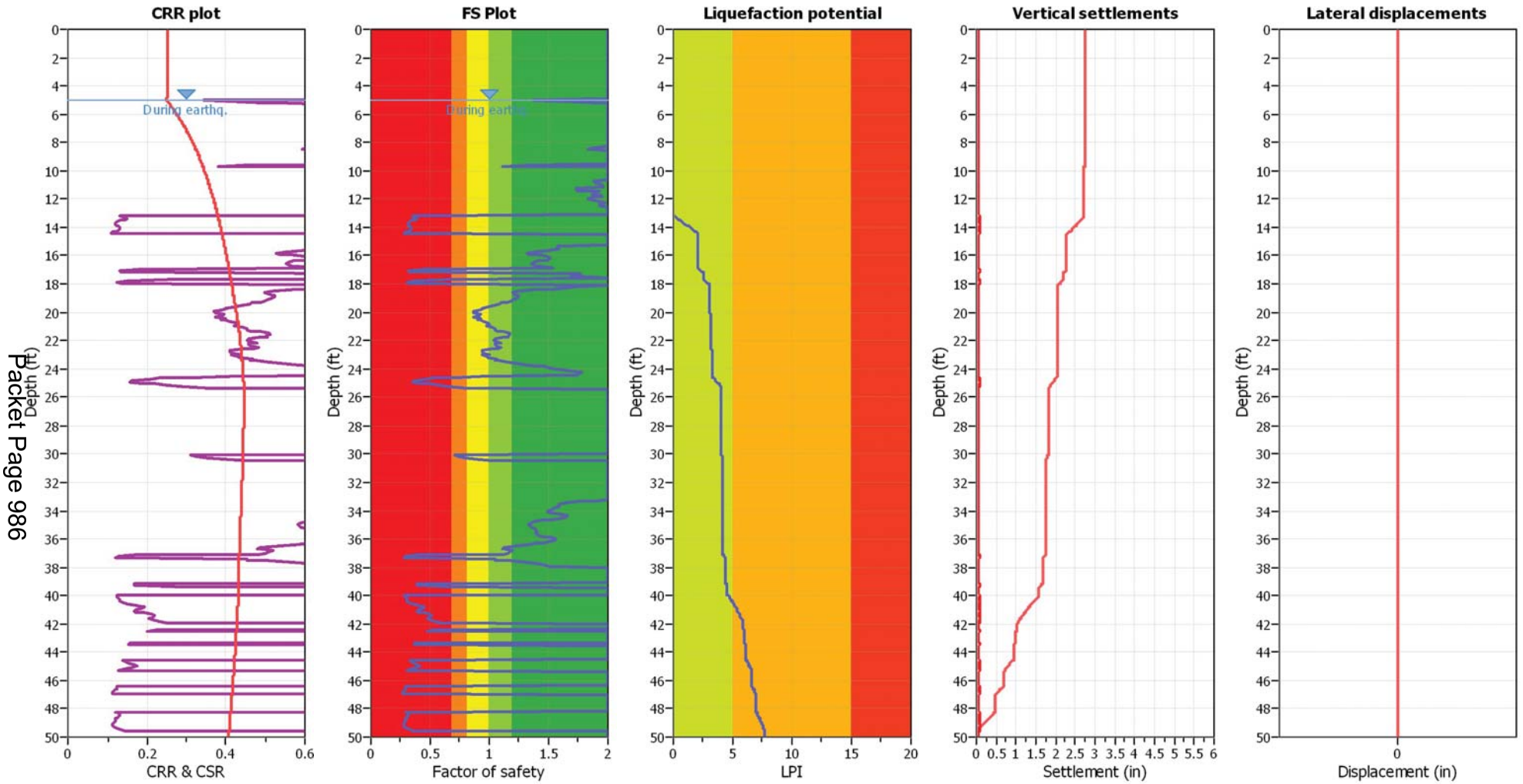
Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

F.S. color scheme

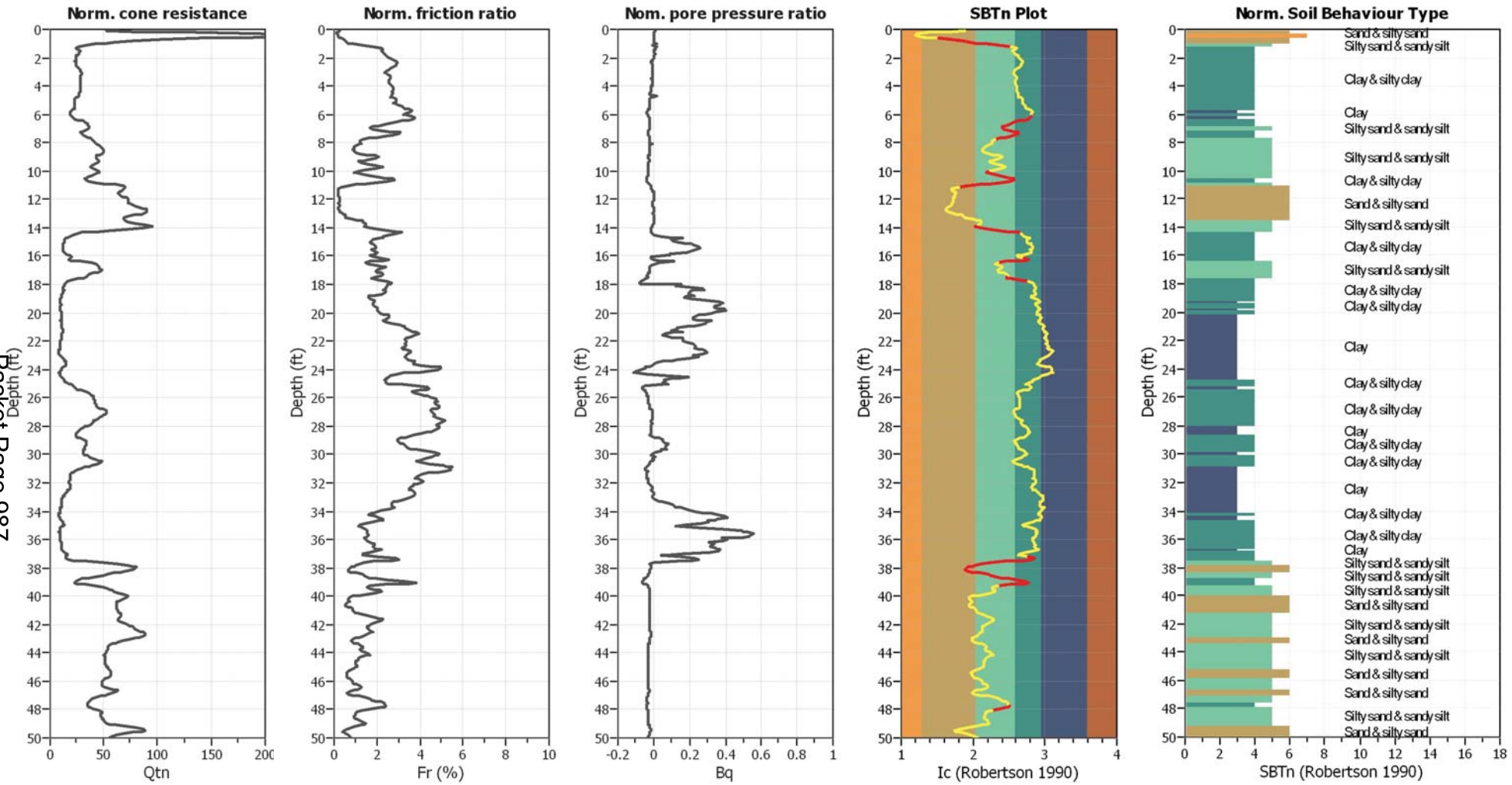
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Packet Page 986

CPT basic interpretation plots (normalized)



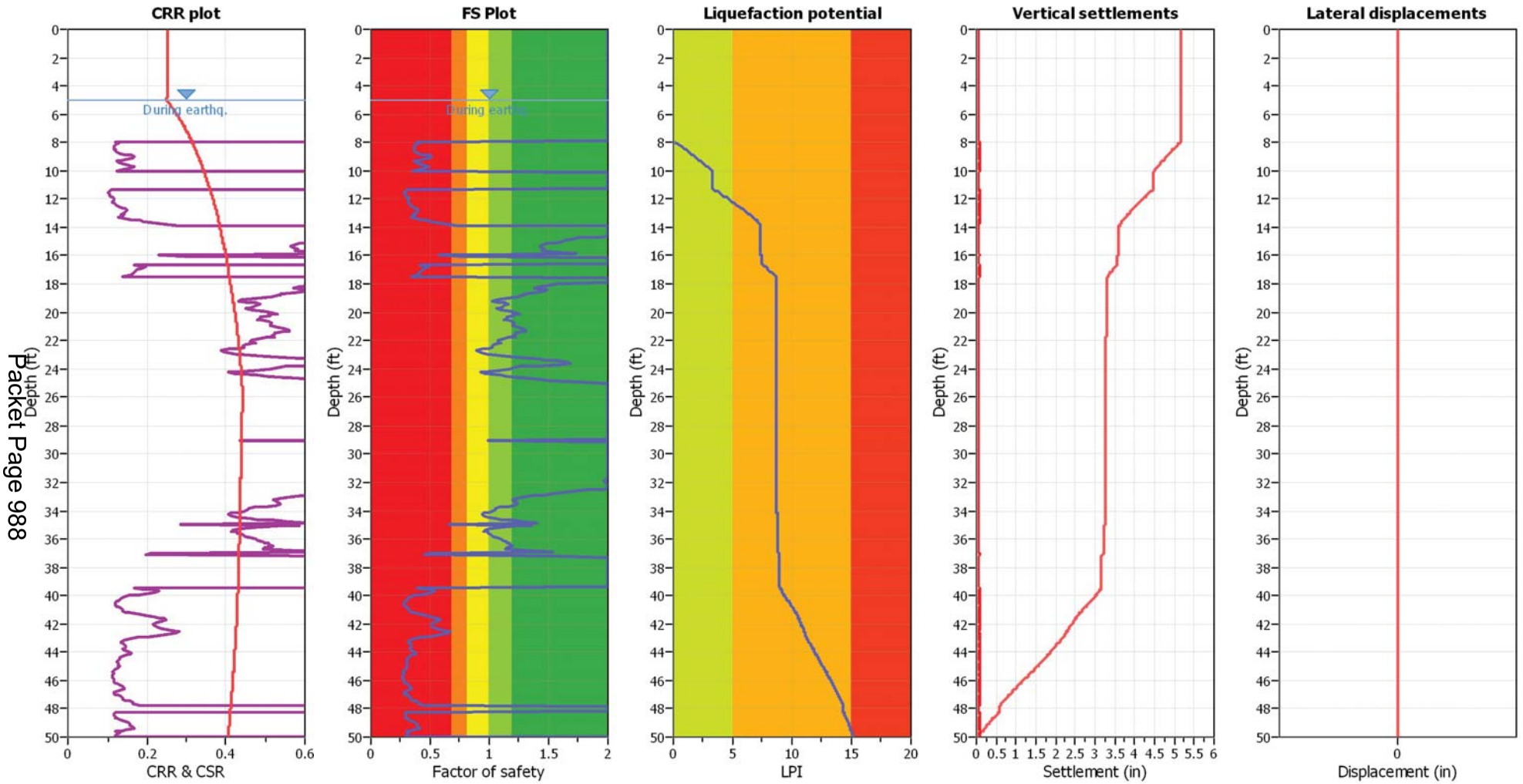
Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

F.S. color scheme

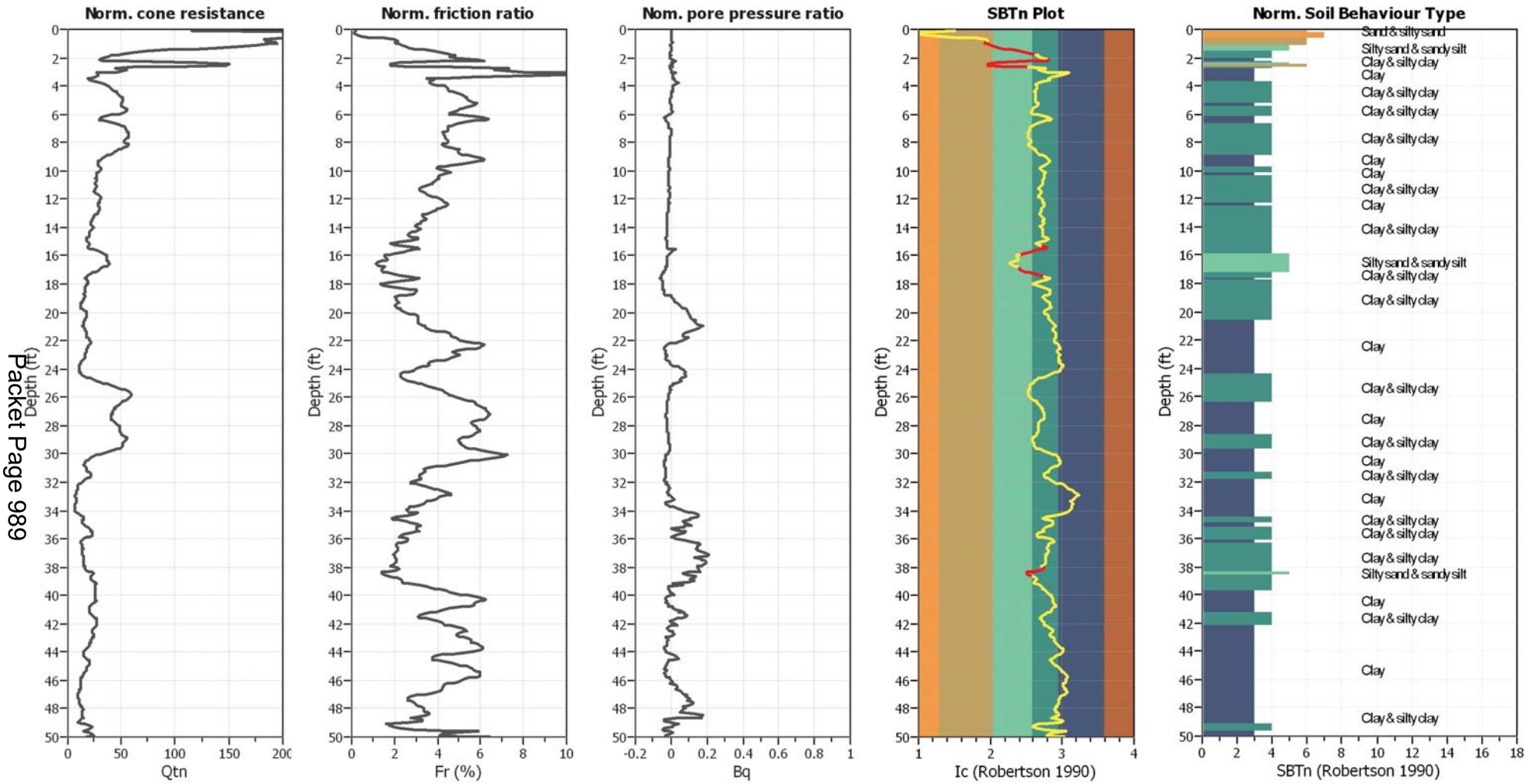
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Packet Page 988

CPT basic interpretation plots (normalized)



Packet Page 989

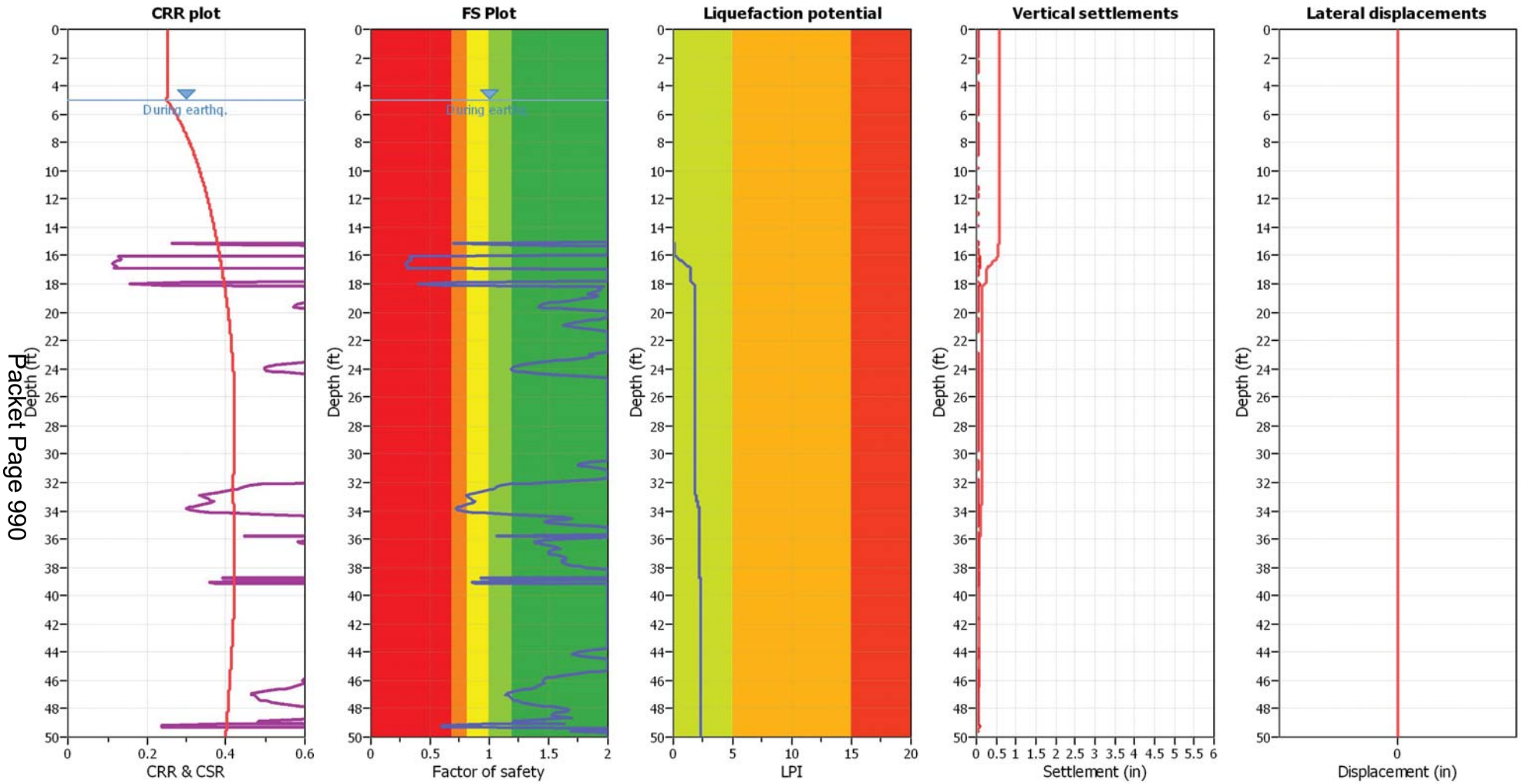
Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Packet Page 990

Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

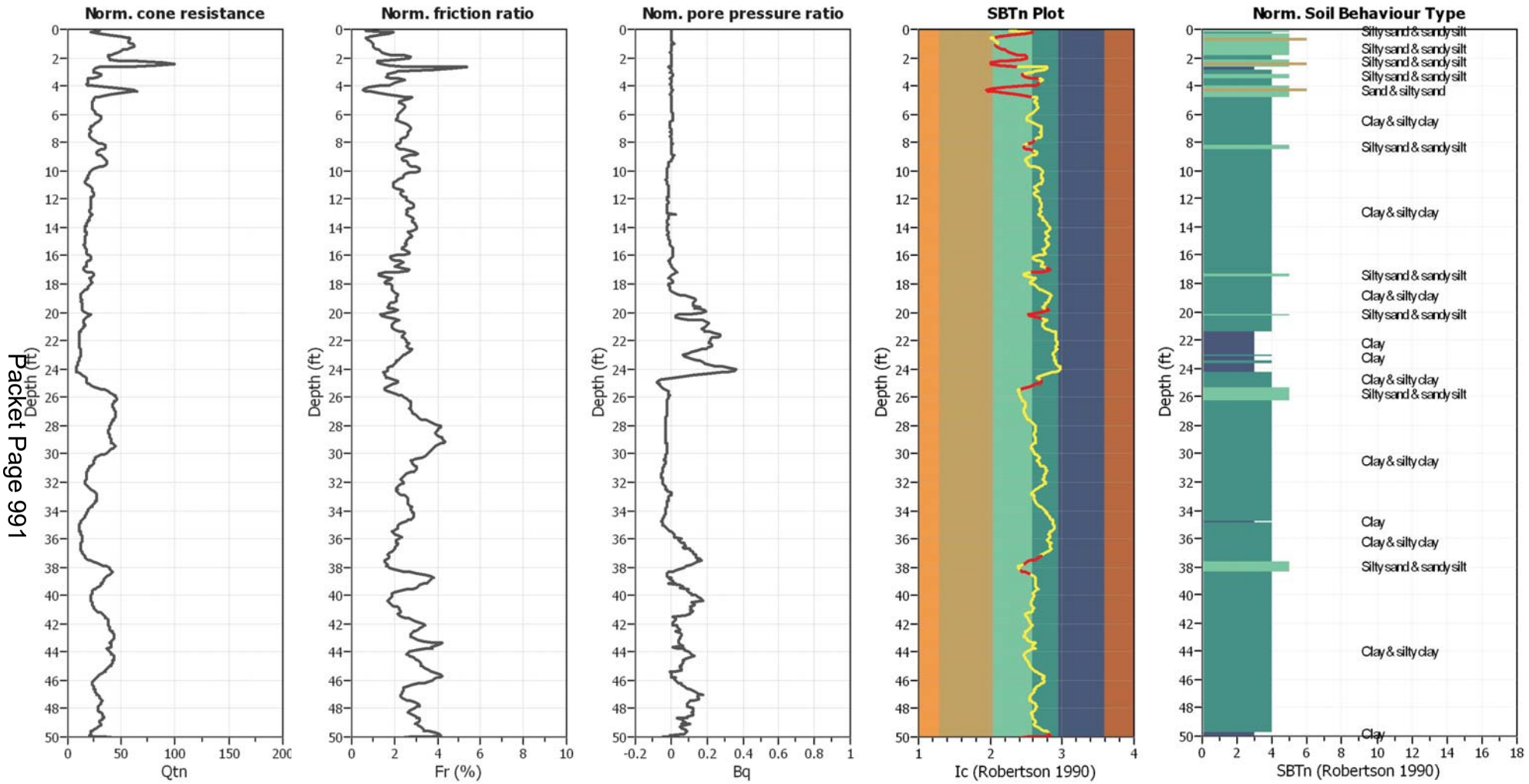
F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

CPT basic interpretation plots (normalized)



Input parameters and analysis data

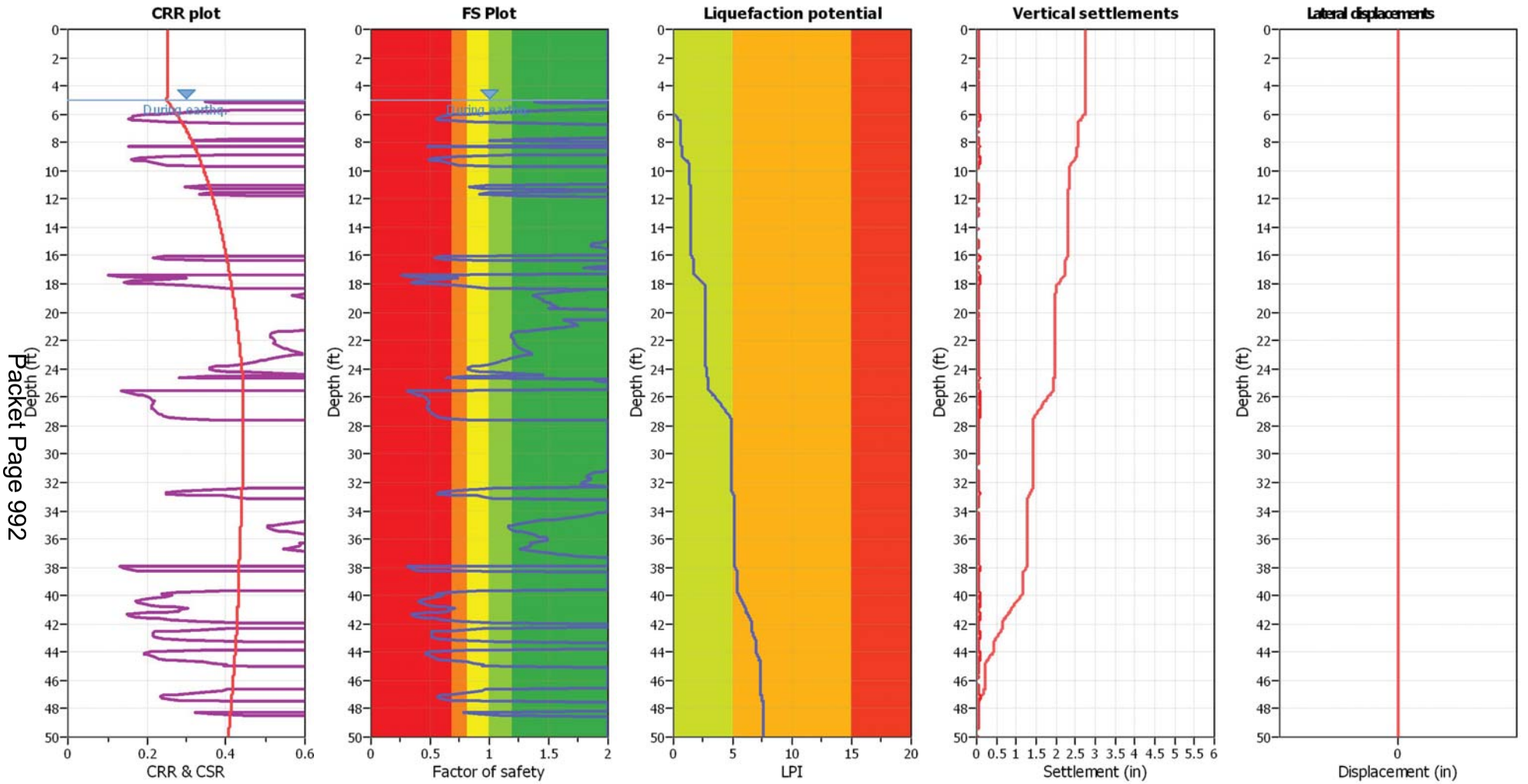
Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Packet Page 991

Liquefaction analysis overall plots



Packet Page 992

Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

APPENDIX B

Boring Logs

Berlogar Stevens & Associates
5587 Sunol Boulevard
Pleasanton, CA 94566

BORING NUMBER B-1

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 7/5/17 **COMPLETED** 7/5/17
GROUND ELEVATION 8.5 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: ▽ **AT TIME OF DRILLING** 8.50 ft / Elev 0.00 ft
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
AT END OF DRILLING ---
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
			0							
CL	SILTY CLAY, gray-brown, moist, very stiff, some fine-grained sand, trace fine-to coarse gravel on top (fill)				32					
SM	SILTY SAND, light to medium gray-brown, moist, loose, fine-grained sand, trace clay (fill)									
CL	SANDY CLAY, mottled light and medium gray-brown, moist to wet, stiff, fine-grained sand (fill)				12			24	10	60
		5			15			25	10	
ML/CL	CLAYEY SILT/SILTY CLAY, brown-gray, wet to saturated, stiff, trace peat		5		13					
	▽	0								
			10							
		-5								
SM	SILTY SAND, light to medium gray-brown, saturated, medium dense, fine-grained sand				22					
			15							

Bottom of borehole at 15.0 feet.

BERLOGAR WITH GROUNDWATER - GINT STD US.GDT - 9/7/17 13:03 - S:\PROJECTS\3855.100\3855.100 BORINGS.GPJ

Berlogar Stevens & Associates
5587 Sunol Boulevard
Pleasanton, CA 94566

BORING NUMBER B-2

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 7/5/17 **COMPLETED** 7/5/17
GROUND ELEVATION 8.5 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: **No Groundwater Encountered**
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
GP	SANDY GRAVEL, red-brown, dry to moist, very dense, fine-to coarse gravel, fine-to coarse-grained sand (fill)		0		70-6					
SP	GRAVELLY SAND, red-brown, moist, very dense, fine-to coarse-grained sand, fine gravel (highly weathered bedrock)				50-2					
		5			50-2					
					50-5					
SP/CL	mixed GRAVELLY SAND and SILTY CLAY, light orange-brown, very dense/hard, fine-to coarse-grained sand, fine gravel, limonite stains (highly weathered bedrock)		5		50-3					
	SILTSTONE, highly weathered	0								
			10		50-6					

Bottom of borehole at 10.5 feet.

BERLOGAR NO GROUNDWATER - GINT STD US.GDT - 9/7/17 13:04 - S:\PROJECTS\3855.100\3855.100 BORINGS.GPJ

Berlogar Stevens & Associates
5587 Sunol Boulevard
Pleasanton, CA 94566

BORING NUMBER B-3

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 7/5/17 **COMPLETED** 7/5/17
GROUND ELEVATION 10 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: **No Groundwater Encountered**
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
	Asphalt Concrete	10	0							
SP	GRAVELLY SAND, gray-brown, moist, dense, fine-to coarse-grained sand, fine gravel									
CL	SILTY CLAY, gray-brown, dry to moist, hard, trace fine-to medium-grained sand, trace fine-to coarse gravel				46					
					27					
SC	CLAYEY SAND, light gray-brown, moist, hard, fine-to medium-grained sand, trace fine-to coarse gravel (highly weathered bedrock)				50-6					
					50-3					
		5	5							
					50-4					
		0	10		50-2					

Bottom of borehole at 10.0 feet.

BERLOGAR NO GROUNDWATER - GINT STD US.GDT - 9/7/17 13:04 - S:\PROJECTS\3855.100\3855.100 BORINGS.GPJ

Berlogar Stevens & Associates
5587 Sunol Boulevard
Pleasanton, CA 94566

BORING NUMBER B-4

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 7/5/17 **COMPLETED** 7/5/17
GROUND ELEVATION 11.5 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: **No Groundwater Encountered**
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
			0							
SC	CLAYEY SAND, dark gray-brown, moist, very stiff, minor concrete debris, heavy caliche stains, trace fine-to coarse gravel (fill)	10			30					
					27			31	14	36
CL	SILTY CLAY, red-brown, moist, very stiff, trace fine gravel, trace fine-grained sand		5		35					
		5			35					
CL	mixed SILTY and SANDY CLAY, light orange-brown, moist, very stiff, fine-grained sand		10		44					

Bottom of borehole at 10.0 feet.

BERLOGAR NO GROUNDWATER - GINT STD US.GDT - 9/7/17 13:04 - S:\PROJECTS\3855.100\3855.100 BORINGS.GPJ

Berlogar Stevens & Associates
5587 Sunol Boulevard
Pleasanton, CA 94566

BORING NUMBER B-5

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 7/5/17 **COMPLETED** 7/5/17
GROUND ELEVATION 8 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: **No Groundwater Encountered**
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
			0							
CL	SILTY CLAY, medium to dark gray-brown, moist, very stiff, trace fine-to medium-grained sand, trace fine-to coarse-gravel				32			41	23	
					31					
		5								
					12					
CL	SANDY CLAY, light brown-gray, moist to wet, stiff, fine-to medium-grained sand, some silt		5		21					

Bottom of borehole at 6.0 feet.

BERLOGAR NO GROUNDWATER - GINT STD US.GDT - 9/7/17 13:04 - S:\PROJECTS\3855.100\3855.100 BORINGS.GPJ

Berlogar Stevens & Associates
5587 Sunol Boulevard
Pleasanton, CA 94566

BORING NUMBER B-6

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 7/5/17 **COMPLETED** 7/5/17
GROUND ELEVATION 7 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: ▽ **AT TIME OF DRILLING** 4.00 ft / Elev 3.00 ft
AT END OF DRILLING ---
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
			0							
SP	GRAVELLY SAND, gray-brown, moist, medium dense, some clay and silt (fill)									
CL	SILTY CLAY, dark gray-brown, moist, stiff,				18					84
		5			29					
CL	SILTY CLAY, light gray-brown, moist, very stiff, limonite stains									
	▽				24					
			5							
SM/ML	SANDY SILT/SILTY SAND, light gray-brown, saturated, medium dense, fine-grained sand				37			28	12	
		0								
SM	SILTY SAND, light gray-brown, saturated, medium dense, fine-grained sand				15					
			10							
SP	SAND, gray-brown, saturated, medium dense, medium-to coarse-grained sand, trace fine gravel	-5			35					

Bottom of borehole at 12.5 feet.

BERLOGAR WITH GROUNDWATER - GINT STD US.GDT - 9/7/17 13:03 - S:\PROJECTS\3855.100\3855.100 BORINGS.GPJ

Berlogar Stevens & Associates
5587 Sunol Boulevard
Pleasanton, CA 94566

BORING NUMBER B-7

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 5/23/17 **COMPLETED** 5/23/17
GROUND ELEVATION 9.5 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: **No Groundwater Encountered**
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
SP	GRAVELLY SAND, gray-brown, moist, medium dense, fine-to coarse-grained sand, fine-to coarse gravel, some silt (fill)		0							
CL	SANDY CLAY, dark gray-brown, moist, medium stiff to stiff, fine-to medium-grained sand, some fine-to coarse gravel, white mottling				12			40	21	76
	Unconfined=442 psf				7	87	31.0			
CL	SILTY CLAY, dark gray-brown, moist, medium stiff	5	5		8					
CL	SILTY CLAY, light gray-brown, moist, stiff	0	10		18					
	below 14-1/2 feet, trace fine-grained sand	-5	15		14					
CL/ML	SILTY CLAY/CLAYEY SILT, light gray-brown, wet, stiff to medium stiff, trace fine-grained sand	-10	20		14					

Bottom of borehole at 21.0 feet.

BERLOGAR NO GROUNDWATER - GINT STD US.GDT - 9/7/17 13:04 - S:\PROJECTS\3855.100\3855.100 BORINGS.GPJ

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Pleasanton, CA 94566

BORING NUMBER B-8

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 5/23/17 **COMPLETED** 5/23/17
GROUND ELEVATION 10 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: ▽ **AT TIME OF DRILLING** 15.00 ft / Elev -5.00 ft
AT END OF DRILLING ---
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
		10	0							
CL	SILTY CLAY, mottled dark and light gray-brown, moist, medium stiff, fine-to coarse-grained sand, trace fine-to coarse gravel, brick debris (fill)									
					10					
					10					
		5	5		12					
CL	SILTY CLAY, dark gray-brown, moist, stiff									
CL	SILTY CLAY, light gray-brown, moist, medium stiff to stiff, trace fine-grained sand									
		0	10		12			31	12	
ML	▽ CLAYEY SILT, light gray-brown, wet, medium stiff	-5	15		11			31	9	
		-10	20		7					

Bottom of borehole at 21.0 feet.

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BORING NUMBER B-9

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 5/23/17 **COMPLETED** 5/23/17
GROUND ELEVATION 7.5 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: **No Groundwater Encountered**
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
			0							
SP	AC Paving approximately 3 inches GRAVELLY SAND, fine-to coarse-grainedd sand, fine-to coarse gravel (base material)									
CL	SILTY CLAY, dark gray-brown, moist, stiff, trace fine-to medium-grained sand Unconfined=1,529 psf at 14.3% strain	5			14	100	23.0			
CL	SILTY CLAY, light gray-brown, moist, medium stiff		5		9					
					8					
ML	SANDY SILT, light gray-brown, wet, medium stiff to soft, fine-grained sand	0								
			10							
SM	SILTY SAND, light gray-brown, saturated, very loose, fine-grained sand				5					
		-5								
	below 15 feet, some clay		15		5	102	21.0			42
		-10								
ML	CLAYEY SILT, gray, saturated, medium stiff to soft		20		6					

Bottom of borehole at 21.0 feet.

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Berlogar Stevens & Associates
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Pleasanton, CA 94566

BORING NUMBER B-10

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 5/23/17 **COMPLETED** 5/23/17
GROUND ELEVATION 7 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: ▽ **AT TIME OF DRILLING** 15.00 ft / Elev -8.00 ft
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
AT END OF DRILLING ---
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
			0							
CL	SILTY CLAY, dark gray-brown, moist, stiff, trace fine-to medium-grained sand (fill)	5			15					
CL	SILTY CLAY, dark gray-brown, moist, medium stiff, trace fine-grained sand				7	103	22.0			
	Unconfined=2,337 psf at 10.7% strain		5		9					
CL	SILTY CLAY, light gray-brown, moist, medium stiff, trace to some fine-grained sand	0								
			10		10					
		-5								
	▽		15							
SP	GRAVELLY SAND, gray-brown, saturated, loose, medium-to coarse-grained sand, fine gravel				10					
		-10								
SP	SAND, light to medium gray-brown, saturated, medium dense, fine-to coarse-grained sand		20		17	104	12.0			3

Bottom of borehole at 21.0 feet.

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Berlogar Stevens & Associates
5587 Sunol Boulevard
Pleasanton, CA 94566

BORING NUMBER B-11

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 5/23/17 **COMPLETED** 5/23/17
GROUND ELEVATION 7 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: ▽ **AT TIME OF DRILLING** 10.00 ft / Elev -3.00 ft
AT END OF DRILLING ---
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
			0							
CL	SILTY CLAY, gray-brown, moist, very stiff, trace fine-to medium-grained sand, trace fine-to coarse gravel (fill)									
		5			24					
	below 2 feet, wet, medium stiff between 2-1/2 and 4 feet, shells, light gray, wet to saturated, loose/medium stiff, small shells approximately 100 percent				9					
CL	SILTY CLAY, dark gray-brown, wet, medium stiff		5		6	98	26.0			
	Unconfined=1,621 psf at 15.3% strain	0								
CL	SANDY CLAY, light gray-brown, wet, medium stiff, fine-grained sand, trace silt									
	▽		10		8					51
	below 12-1/2 feet, less sand	-5								
			15		5					47
SM	SILTY SAND, light gray-brown, saturated, very loose, fine-grained sand, trace clay	-10								
ML	CLAYEY SILT, light brown-gray, saturated, medium stiff, limonite stains		20		9					85

Bottom of borehole at 21.0 feet.

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Pleasanton, CA 94566

BORING NUMBER B-12

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 5/23/17 **COMPLETED** 5/23/17
GROUND ELEVATION 10 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: **No Groundwater Encountered**
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
		10	0							
SM	SILTY SAND, light to medium brown-gray, moist, medium stiff, fine-to coarse-grained sand, trace clay, trace fine-to coarse gravel, minor concrete debris, green and white mottling serpentinite (fill)				42					
	SANDSTONE, orange-brown, moist, friable, low hardness, highly weathered				70-6					
					50-6					
		5	5							
		0	10		60-6					

Bottom of borehole at 10.0 feet.

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Pleasanton, CA 94566

BORING NUMBER B-13

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 5/23/17 **COMPLETED** 5/23/17
GROUND ELEVATION 16.5 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: ▽ **AT TIME OF DRILLING** 4.50 ft / Elev 12.00 ft
AT END OF DRILLING ---
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
SM	SILTY SAND, light to medium gray-brown, moist, medium dense, fine-to coarse-grained sand, white mottling (fill)		0							
		15			34					
					22					
SC	▽ CLAYEY SAND, white gray, saturated, medium dense, fine-to medium-grained sand (fill)		5		24					
	at 4 feet, wood / log platform									
CL	SILTY CLAY, dark gray-brown, moist, stiff, trace fine-grained sand, trace fine-to coarse gravel	10			16					
CL	SILTY CLAY, gray-brown, moist, stiff, trace fine-grained sand, trace fine gravel		10		21					
		5								
CL	SILTY CLAY, light red-brown, moist, hard, trace fine-to coarse-grained sand, trace fine gravel (highly weathered bedrock)		15		50-5					
		0								
CL	SANDY CLAY, light orange-brown, moist, very stiff, fine-grained sand		20		50-5					
	SANDSTONE, light orange-brown, friable, low hardness, fine-to medium-grained									

Bottom of borehole at 20.5 feet.

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Pleasanton, CA 94566

BORING NUMBER B-14

CLIENT Integral Partners Funding, LLC
PROJECT NAME Parcel C - FMC Property
PROJECT NUMBER 3855.100
PROJECT LOCATION Newark, CA
DATE STARTED 5/23/17 **COMPLETED** 5/23/17
GROUND ELEVATION 8 ft
DRILLING CONTRACTOR EGI
GROUNDWATER: ▽ **AT TIME OF DRILLING** 15.00 ft / Elev -7.00 ft
AT END OF DRILLING ---
DRILLING METHOD Hollow Stem Auger 2.5" I.D. Split Barrel
LOGGED BY ROV
NOTES

Modified California Sampler

USCS	MATERIAL DESCRIPTION	ELEVATION (ft)	DEPTH (ft)	SAMPLER	BLOW COUNT	DRY UNIT WT. (pcf)	MOISTURE CONTENT (%)	LIQUID LIMIT	PLASTICITY INDEX	FINES CONTENT PASSING #200
			0							
CL	SILTY CLAY, dark gray-brown, moist, medium stiff to stiff, trace fine-to medium-grained sand, trace fine gravel				11					
CL	SILTY CLAY, light gray-brown, moist, stiff, trace fine-to medium-grained sand, trace fine gravel	5			14					
			5		12					
CL	SILTY CLAY with SAND, light gray-brown, moist, medium stiff	0								
	below 10 feet, moist to wet		10		7	99	25.0	28	10	77
ML	SANDY SILT, light gray-brown, wet to saturated, soft, fine-grained sand	-5								
SM	▽ SILTY SAND, light gray-brown, saturated, very loose, fine-grained sand		15		5					
CL/ML	SANDY CLAY / SANDY SILT, light gray-brown, saturated, soft, trace fine-grained sand	-10								
			20		5	99	23.0			83

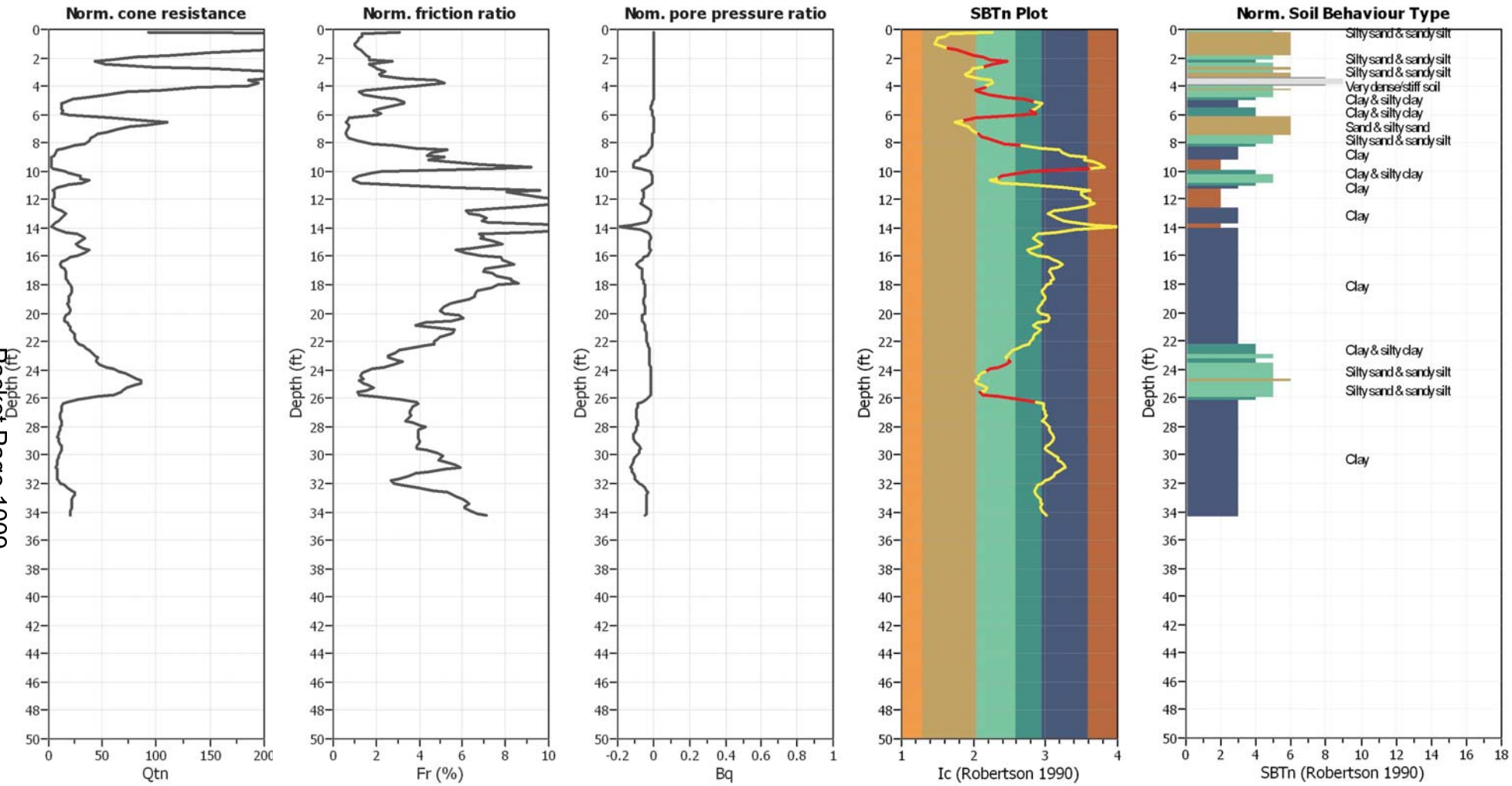
Bottom of borehole at 21.0 feet.

BERLOGAR WITH GROUNDWATER - GINT STD US.GDT - 9/7/17 13:13 - S:\PROJECTS\3855.100\3855.100 BORINGS.GPJ

APPENDIX C

BSA 2010 & 2011 CPT Graphs
BSA 2011 Boring Logs
BGC 2007 Test Pit Log

CPT basic interpretation plots (normalized)



Packet Page 1009

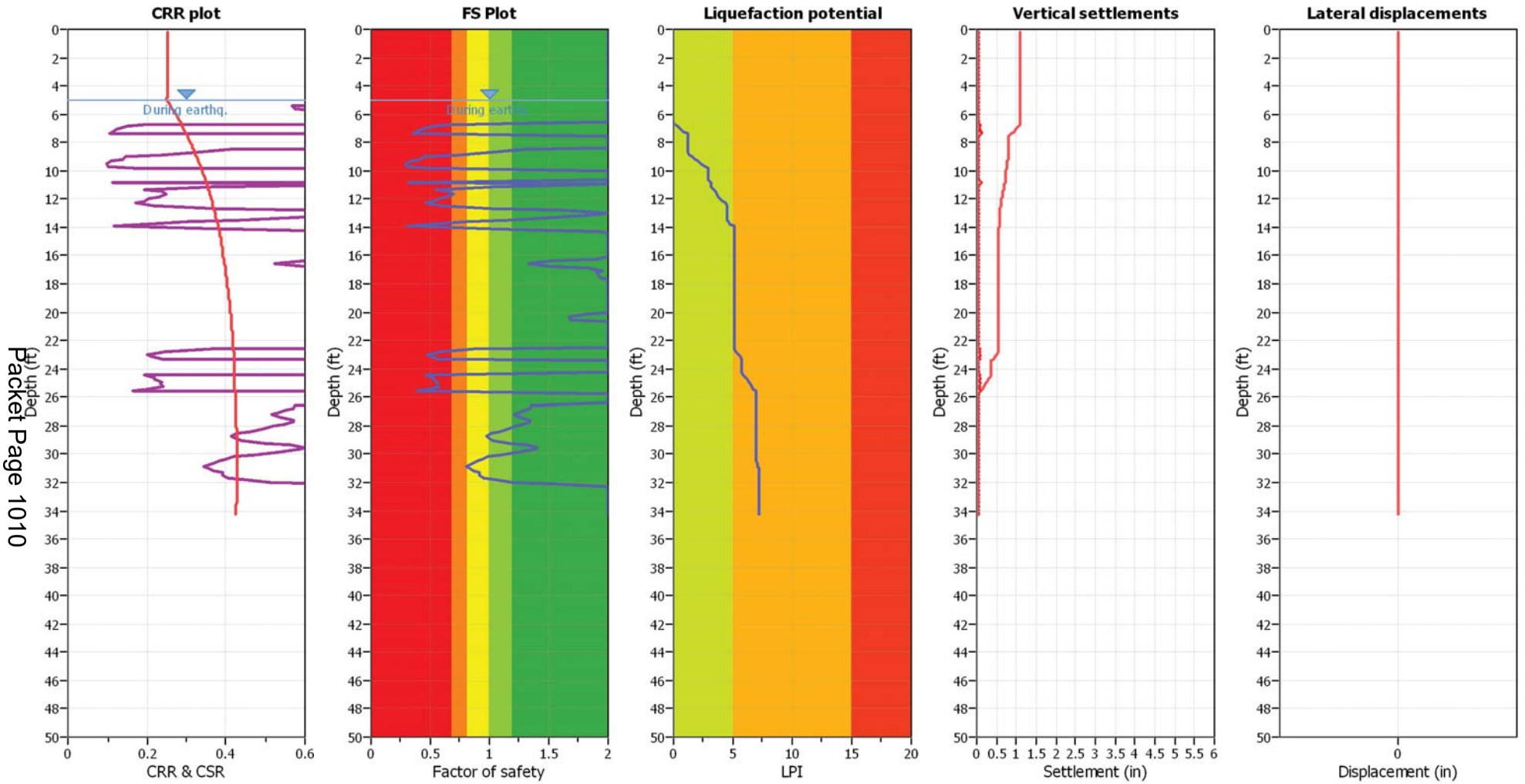
Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

F.S. color scheme

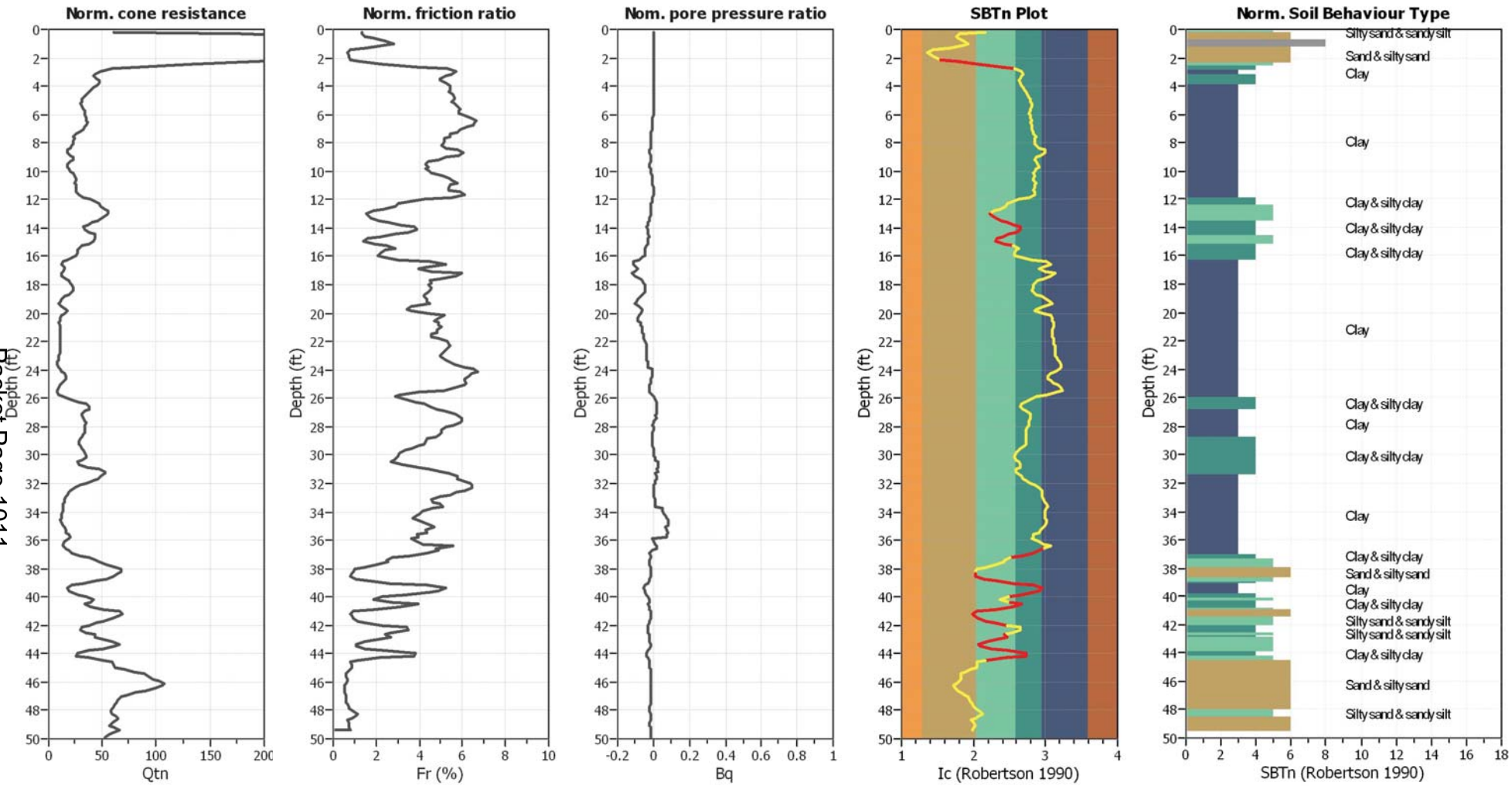
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Packet Page 1010

CPT basic interpretation plots (normalized)



Packet Page 1011

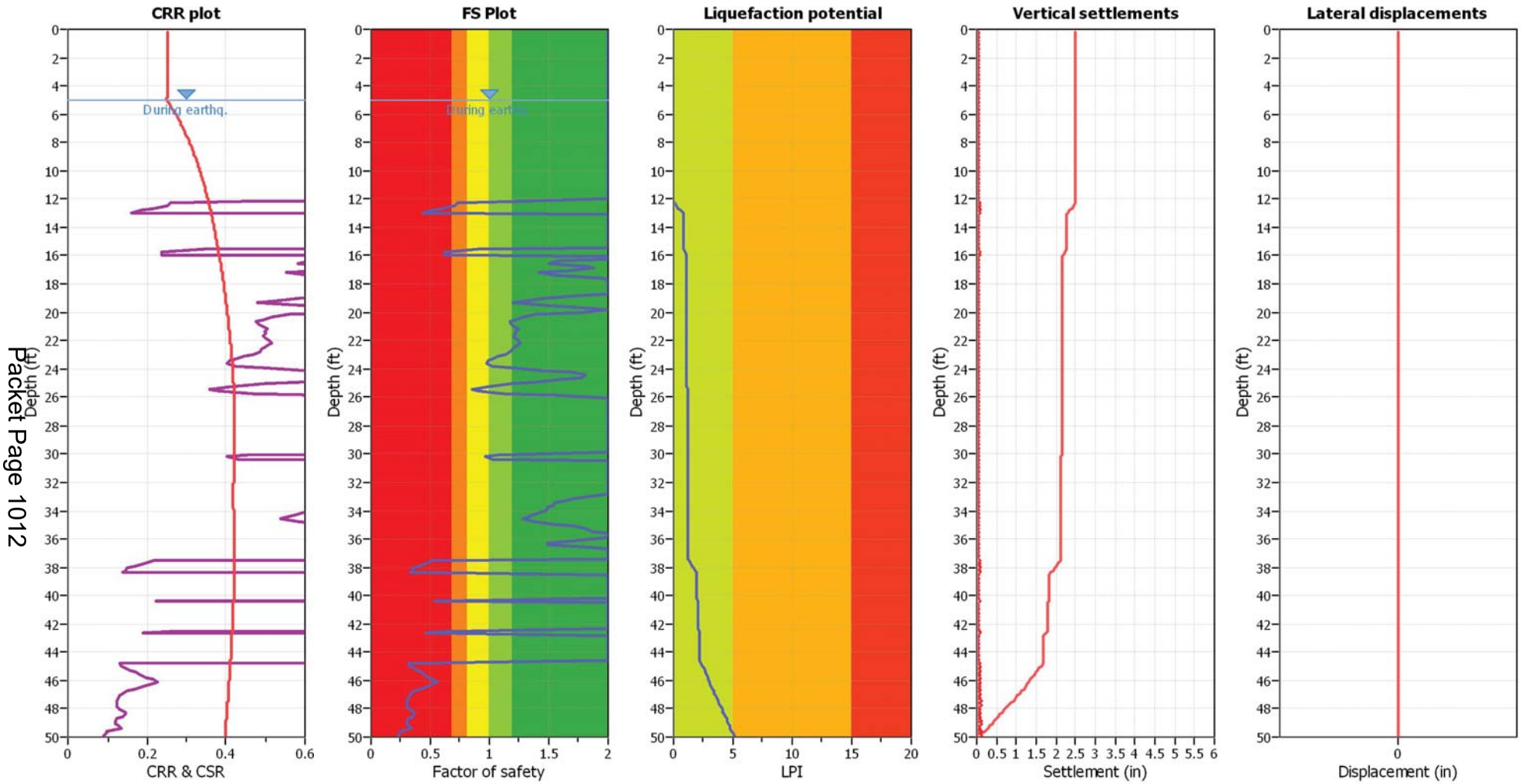
Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	Yes
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	Yes
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	Yes
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	50.00 ft

F.S. color scheme

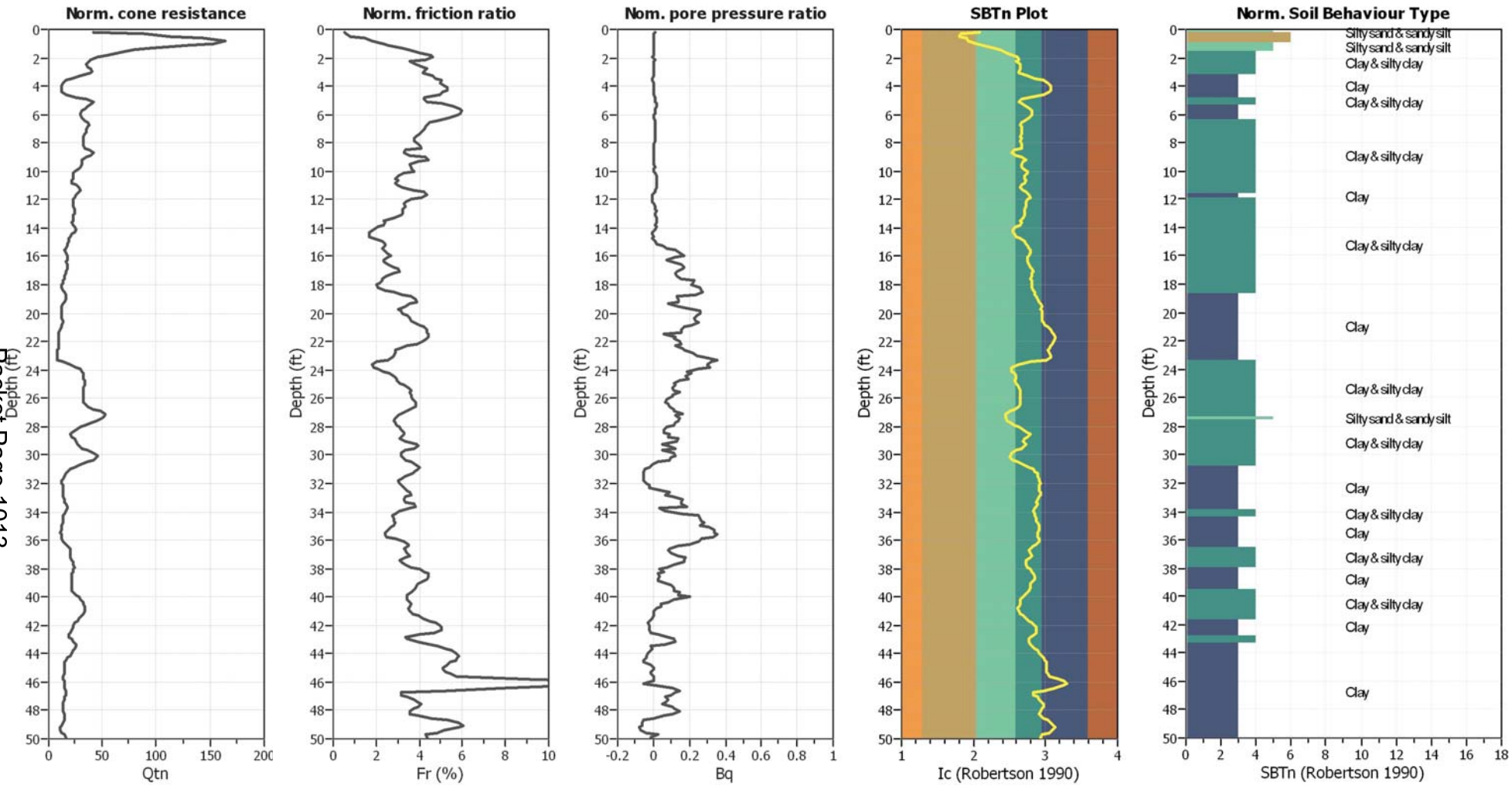
- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

Packet Page 1012

CPT basic interpretation plots (normalized)



Packet Page 1013

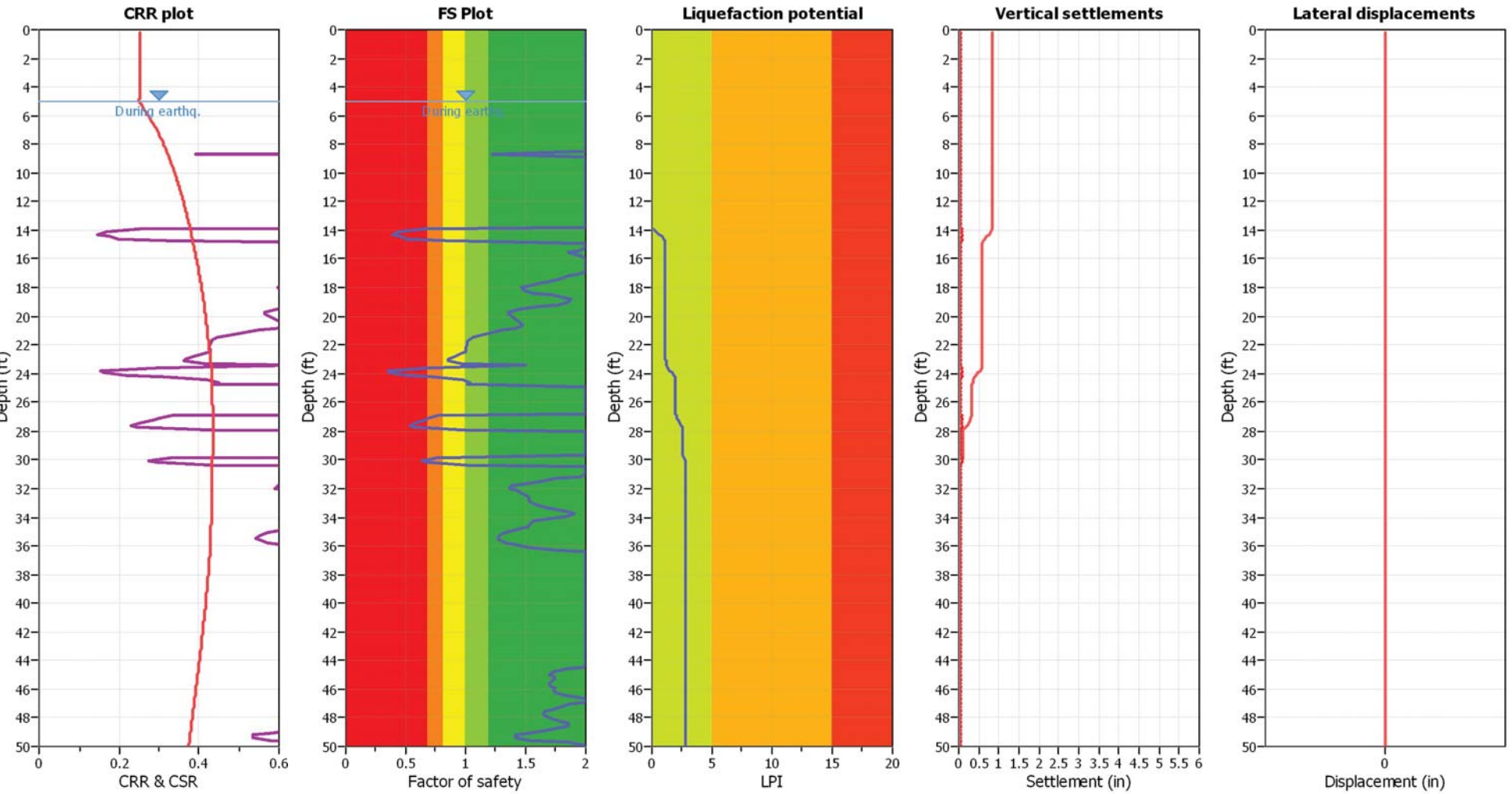
Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	No
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

SBTn legend

1. Sensitive fine grained
2. Organic material
3. Clay to silty clay
4. Clayey silt to silty
5. Silty sand to sandy silt
6. Clean sand to silty sand
7. Gravely sand to sand
8. Very stiff sand to
9. Very stiff fine grained

Liquefaction analysis overall plots



Packet Page 1014

Input parameters and analysis data

Analysis method:	Robertson (2009)	Depth to water table (erthq.):	5.00 ft	Fill weight:	N/A
Fines correction method:	Robertson (2009)	Average results interval:	3	Transition detect. applied:	No
Points to test:	Based on Ic value	Ic cut-off value:	2.60	K_σ applied:	No
Earthquake magnitude M_w:	6.80	Unit weight calculation:	Based on SBT	Clay like behavior applied:	All soils
Peak ground acceleration:	0.50	Use fill:	No	Limit depth applied:	No
Depth to water table (insitu):	5.00 ft	Fill height:	N/A	Limit depth:	N/A

F.S. color scheme

- Almost certain it will liquefy
- Very likely to liquefy
- Liquefaction and no liquefaction are equally likely
- Unlike to liquefy
- Almost certain it will not liquefy

LPI color scheme

- Very high risk
- High risk
- Low risk

BORING LOG B-1

Job No.: 3268.102	**Client:** Dumbarton Area 2, LLC	**Elevation**: 10 feet (NGVD 29)
Job Name: Cargill Hill Parcel	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 12-21-11

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30
Standard Penetration Test	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS
			0			
						AKALINE MATERIAL (magnesia), white, wet, soft
-	-	6				96.2% passing #200 sieve, PI=2 LL=43
			5			
					CL	SILTY CLAY, olive-brown, saturated, very stiff
19.9	109	35				87.5% passing #200 sieve, PI=18 LL=35 unconfined compressive strength = 3,909 psf
			10			
-	-	18			CL-ML	SILTY CLAY with SAND, gray-brown, stiff, saturated 77.5% passing #200 sieve, PI=5 LL=26
			15			
					SM	SILTY SAND, brown-gray, saturated, dense, fine-to medium-grained sand
-	-	47				19.7% passing #200 sieve
			20			
					CL	SILTY CLAY, dark brown, saturated, stiff

BORING LOG B-1

Job No.: 3268.102	**Client:** Dumbarton Area 2, LLC	**Elevation**: 10 feet (NGVD 29)
Job Name: Cargill Hill Parcel	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 12-21-11

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30
Standard Penetration Test	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS
-	-	47	20		SM	SILTY SAND, brown-gray, saturated, dense, fine-to medium-grained sand
					CL	SILTY CLAY, dark brown, saturated, stiff
31.2	93	20	25			unconfined compressive strength = 1,904 psf
-	-	76/11”	30			below 29 feet, yellow-gray-brown, saturated, hard, trace coarse-grained sand
			35			Boring terminated at 30 feet Groundwater encountered at 6 feet
			40			

BORING LOG B-2

Job No.: 3268.102	**Client:** Dumbarton Area 2, LLC	**Elevation**: 8 feet (NGVD 29)
Job Name: Cargill Hill Parcel	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 12-21-11

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS
			0			
-	-	72			SC	CLAYEY SAND with GRAVEL, dark brown, dry to moist, dense, fine-to coarse-grained sand, fine subangular to subrounded gravel 30.6% passing #200 sieve, PI=15 LL=29
-	-	81	5		CL	SILTY CLAY with SAND, gray-brown, moist, hard
						below 7 feet, saturated
20.3	109	51	10			below 8-1/2 feet, orange-brown, very stiff 89.1% passing #200 sieve, PI=12 LL=32 unconfined compressive strength = 3,383 psf
					ML	SILT with SAND, yellow-brown, saturated, very stiff, fine-grained sand
-	-	24	15			71.1% passing #200 sieve
-	-	27	20		ML	SILT, yellow-brown, saturated, very stiff 92.3% passing #200 sieve, PI=6 LL=31

BORING LOG B-2

Job No.: 3268.102	**Client:** **Dumbarton Area 2, LLC**	**Elevation**: 8 feet (NGVD 29)
Job Name: Cargill Hill Parcel	**Drill Method**: Hollow-Stem Auger	**Date Drilled**: 12-21-11

SAMPLER TYPE:	DRIVE WEIGHT (LBS.)	HEIGHT OF FALL (IN.)
2.5-inch I.D. Split Barrel	140	30

Moisture Content (%)	Dry Unit Weight (PCF)	Penetration Resistance (blows/foot)	Depth (feet)	Sample Symbol	USCS Classification	DESCRIPTION AND REMARKS
-	-	27			ML	SILT, yellow-brown, saturated, very stiff
			20			
			-			
			-		CL	SILTY CLAY, gray, saturated, very stiff
			-			
31.7	88	29	-			unconfined compressive strength = 1,661 psf
			25			
			-			
			-			
			-			
-	-	74	-			below 28-1/2 feet, blue-gray, hard
			30			
			-			Boring terminated at 30 feet Groundwater encountered at 7 feet
			-			
			-			
			-			
			35			
			-			
			-			
			-			
			40			

Job No. 2914.101
Cargill Parcel 2
Newark, California

TEST PIT LOGS – 9/27/07

Test Pit Number	Depth (feet)	Description
TP-1 Elev. 23 feet	0 – 2	Clayey Gravel, gray-brown, moist, medium dense, with sand, trace roots, concrete and brick fragments, well-graded sand and gravel (FILL).
	2 – 6	Silty Clay, dark gray-brown, moist, very stiff.
	6 – 7	SANDSTONE, fine-grained, reddish-brown, weathered, fractured, moderately strong to weak, some oxidation staining. Top of Sandstone at 17-feet elevation
		Total Depth 7 feet No free groundwater encountered
TP-2 Elev. 19 feet	0 – 1½	Silty Gravel, gray-brown, dry, loose, trace brick fragments, some magnesium concretions (FILL).
	1½ – 3	SANDSTONE, fine-grained, tan, weathered, slightly fractured, moderately strong, some oxidation staining. Top of Sandstone at 17-feet elevation.
		Total Depth 3 feet No free groundwater encountered

APPENDIX D

Geotechnical Laboratory Test Results

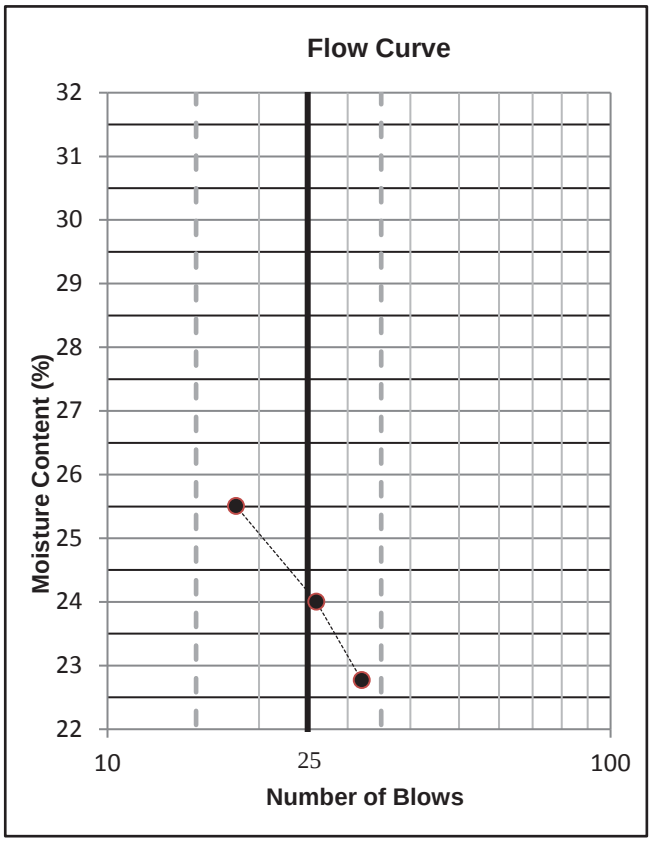
Atterberg Limits Test Data ASTM D 4318

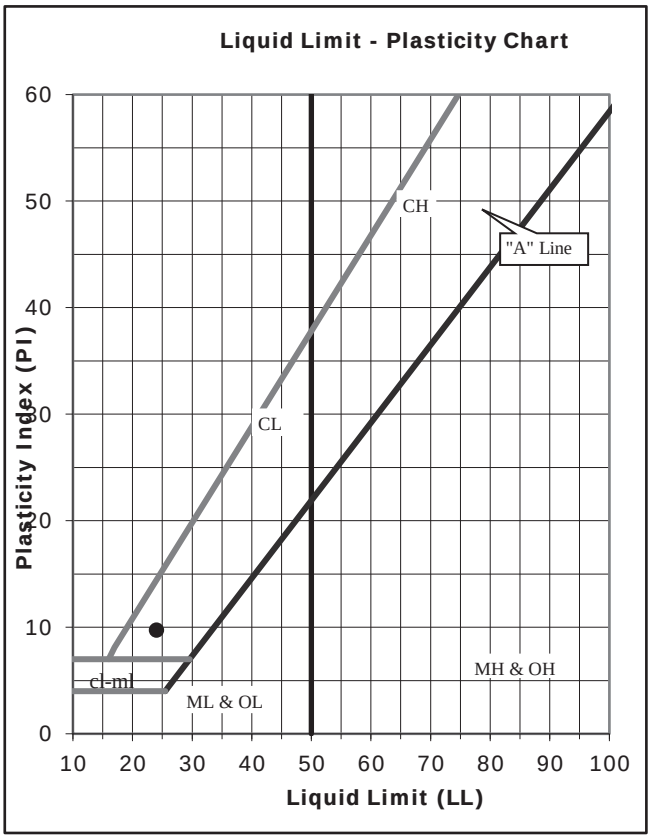
Project Name: FMC	Project Number: 3855.100
Sample ID: B1 at 2ft	Date Tested: 07/28/17
Material Description: CL Sandy Clay Dark Gray	Invoice Number: 15367

Summary of Test Results

Liquid Limit:	24	Plastic Limit:	14	Plasticity Index:	10
Classification:	CL Lean Clay				

	Liquid Limit					Plastic Limit		
Tare ID:	e2	e3	e4			e8	e5	
Number Of Blows:	32	26	18					
Tare Mass, (g):	13.84	13.64	13.73			13.73	13.74	
Wet Soil + Tare Mass, (g):	25.00	28.93	27.36			23.61	26.36	
Dry Soil + Tare Mass, (g):	22.93	25.97	24.59			22.37	24.79	
Moisture Content, %:	22.8	24.0	25.5			14.4	14.2	





Tested By: GS

Reported By: G Suckow

Berlogar Stevens & Associates Pleasanton, CA

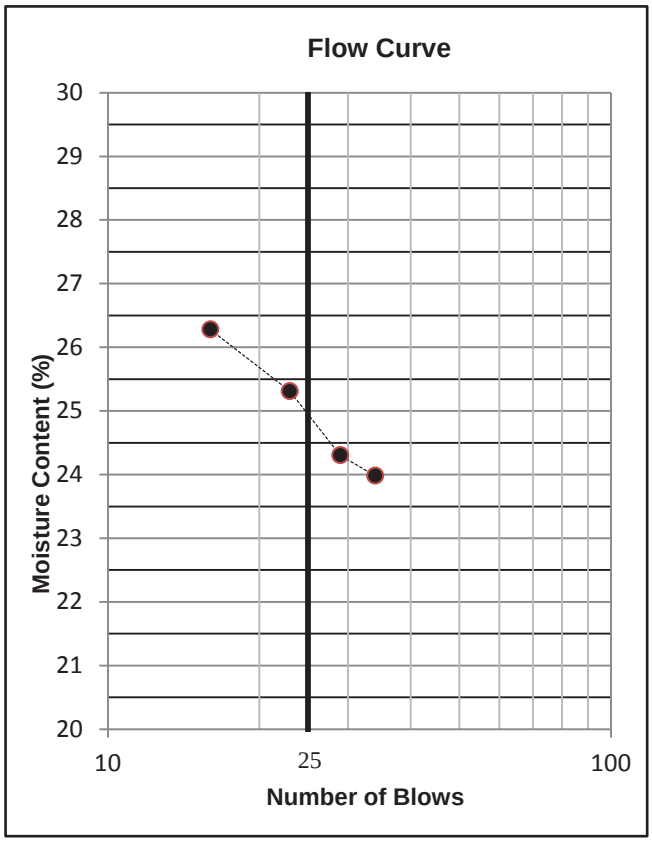
Atterberg Limits Test Data ASTM D 4318

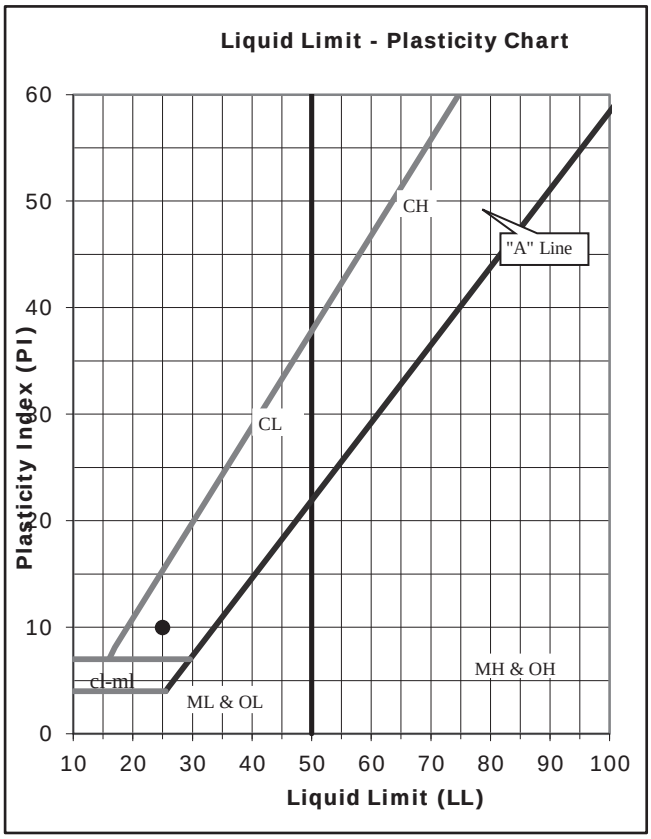
Project Name: Parcel C FMC	**Project Number:** 3855.100
Sample ID: B1 at 5ft	**Date Tested:** 07/11/17
Material Description: **Silty Clay Dark Gray Brown**	Invoice Number: 15345

Summary of Test Results

Liquid Limit:	**25**	**Plastic Limit:**	**15**	**Plasticity Index:**	**10**
Classification:	**CL Lean Clay**				

	Liquid Limit					Plastic Limit		
Tare ID:	a1	c8	d1	g1		kj	w9	
Number Of Blows:	**34**	**29**	**23**	**16**				
Tare Mass, (g):	20.01	14.81	20.07	14.11		13.54	14.07	
Wet Soil + Tare Mass, (g):	31.59	27.29	33.14	26.70		22.61	25.17	
Dry Soil + Tare Mass, (g):	29.35	24.85	30.50	24.08		21.43	23.71	
Moisture Content, %:	**24.0**	**24.3**	**25.3**	**26.3**		**15.0**	**15.1**	





Tested By: gs

Reported By: G Suckow

Berlogar Stevens & Associates Pleasanton, CA

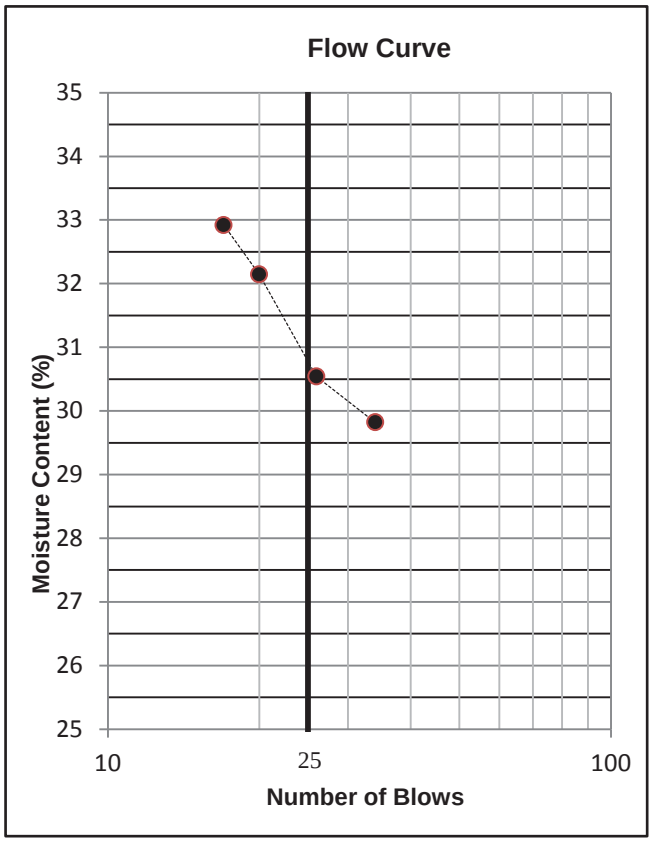
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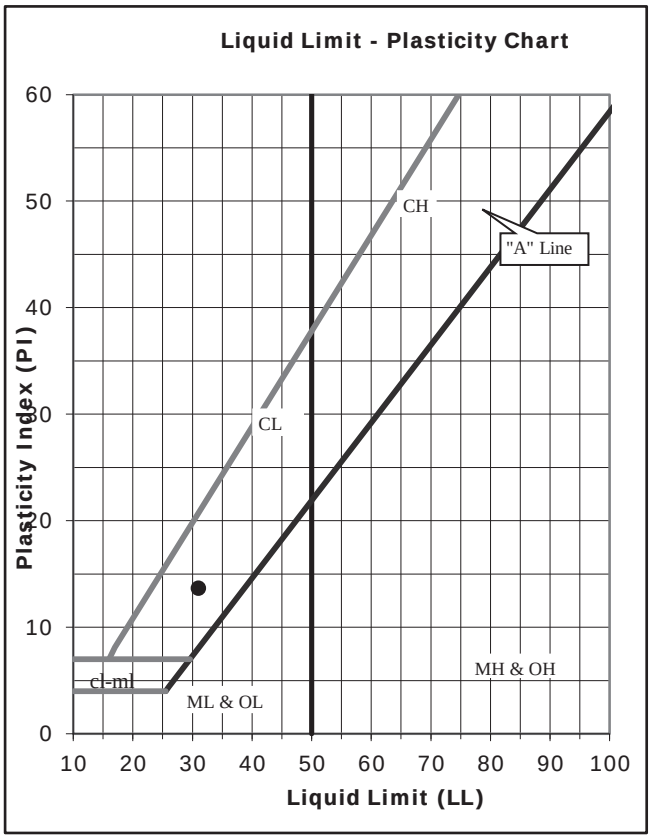
Project Name: Parcel C FMC	**Project Number:** 3855.100
Sample ID: B4 at 2ft	**Date Tested:** 07/11/17
Material Description: **SC Clayey Sand with Gravel Dark Brown**	Invoice Number: 15345

Summary of Test Results

Liquid Limit:	**31**	**Plastic Limit:**	**17**	**Plasticity Index:**	**14**
Classification:	**CL Lean Clay**				

	Liquid Limit					Plastic Limit		
Tare ID:	3a	3b	3f	3g		3e	3x	
Number Of Blows:	**34**	**26**	**20**	**17**				
Tare Mass, (g):	13.71	13.47	13.97	13.60		13.59	13.89	
Wet Soil + Tare Mass, (g):	23.20	23.69	23.96	23.25		20.33	22.99	
Dry Soil + Tare Mass, (g):	21.02	21.30	21.53	20.86		19.33	21.65	
Moisture Content, %:	**29.8**	**30.5**	**32.1**	**32.9**		**17.4**	**17.3**	





Tested By: gs

Reported By: G Suckow

Berlogar Stevens & Associates Pleasanton, CA

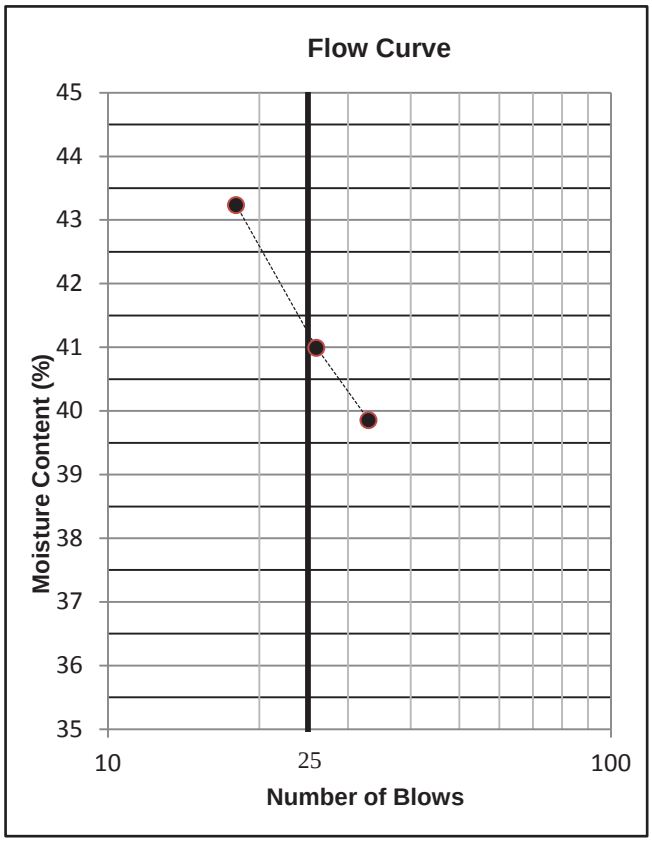
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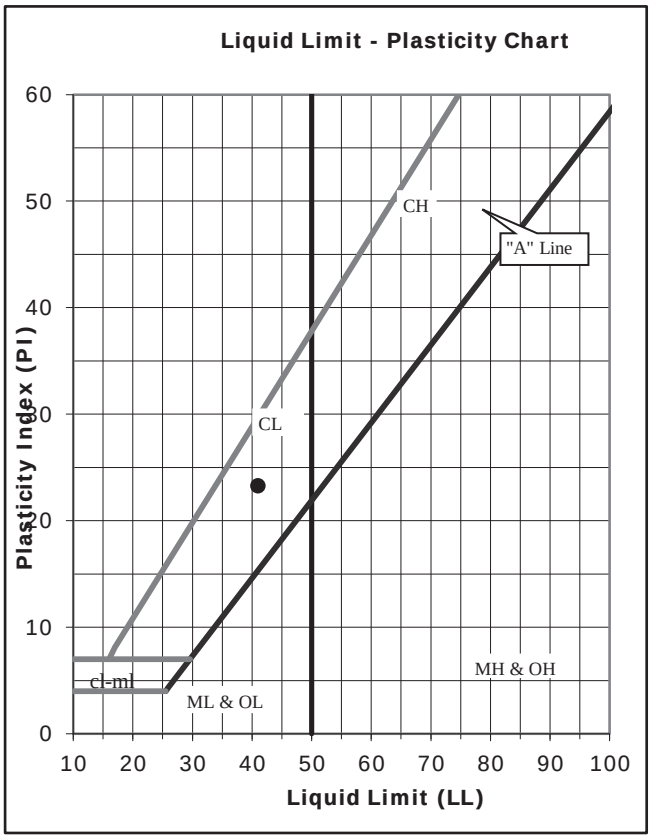
Project Name: Parcel C FMC	**Project Number:** 3855.100
Sample ID: B6 at 1/2ft	**Date Tested:** 07/11/17
Material Description: **CL Silty Clay with Sand Dark Gray Brown**	Invoice Number: 15345

Summary of Test Results

Liquid Limit:	**41**	**Plastic Limit:**	**18**	**Plasticity Index:**	**23**
Classification:	**CL Lean Clay**				

	Liquid Limit					Plastic Limit		
Tare ID:	e2	e4	e5			e1	e8	
Number Of Blows:	**33**	**26**	**18**					
Tare Mass, (g):	13.81	13.71	13.69			13.68	13.75	
Wet Soil + Tare Mass, (g):	23.46	23.96	21.31			20.54	19.71	
Dry Soil + Tare Mass, (g):	20.71	20.98	19.01			19.51	18.81	
Moisture Content, %:	**39.9**	**41.0**	**43.2**			**17.7**	**17.8**	





Tested By: gs

Reported By: G Suckow

Berlogar Stevens & Associates Pleasanton, CA

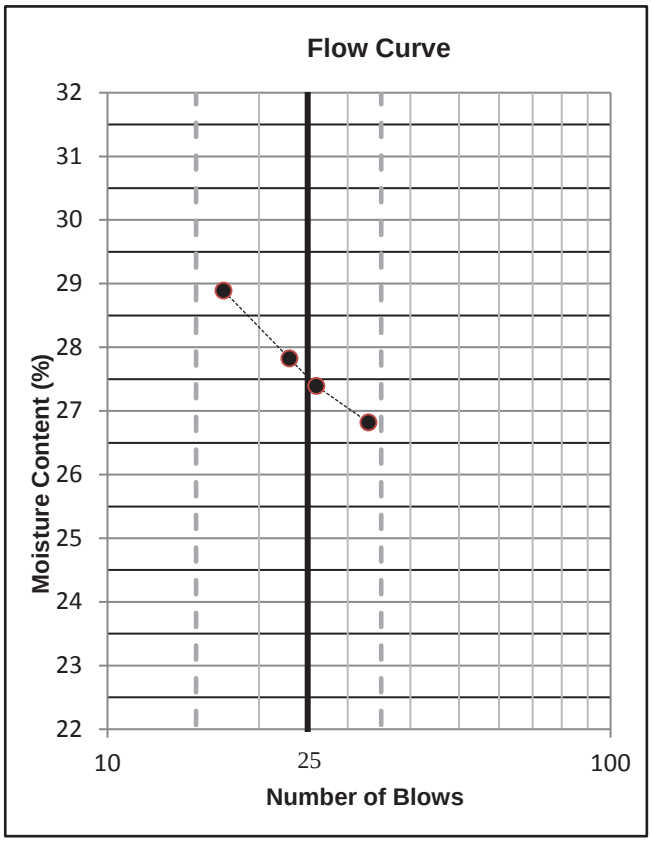
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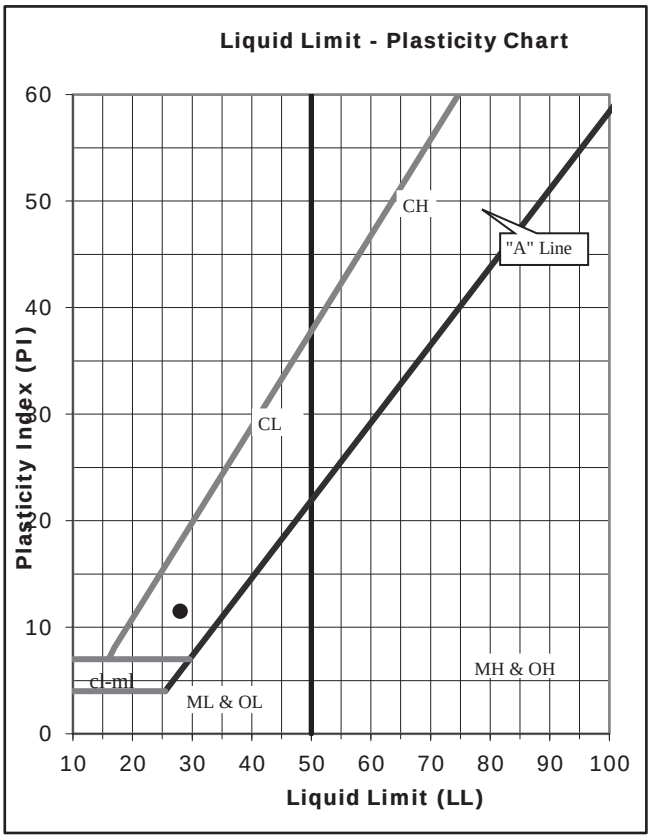
Project Name: FMC	Project Number: 3855.100
Sample ID: B6 at 4-1/2 to 5ft	Date Tested: 08/31/17
Material Description: CL Silty Clay with Sand Lenses Light Olive Brown	Invoice Number: 15430

Summary of Test Results

Liquid Limit:	28	Plastic Limit:	16	Plasticity Index:	12
Classification:	CL Lean Clay				

	Liquid Limit					Plastic Limit		
Tare ID:	6A	6B	6G	6T		E2	E3	
Number Of Blows:	33	26	23	17				
Tare Mass, (g):	13.79	13.75	13.92	13.90		13.86	13.42	
Wet Soil + Tare Mass, (g):	27.03	28.12	28.85	27.15		22.65	26.70	
Dry Soil + Tare Mass, (g):	24.23	25.03	25.60	24.18		21.42	24.80	
Moisture Content, %:	26.8	27.4	27.8	28.9		16.3	16.7	





Tested By: GS

Reported By: G Suckow

Berlogar Stevens & Associates Pleasanton, CA

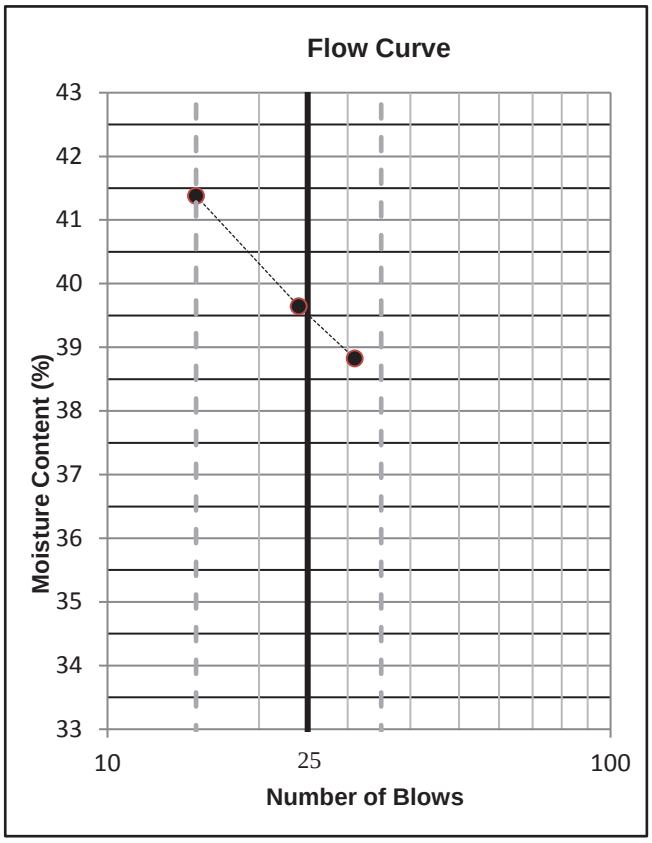
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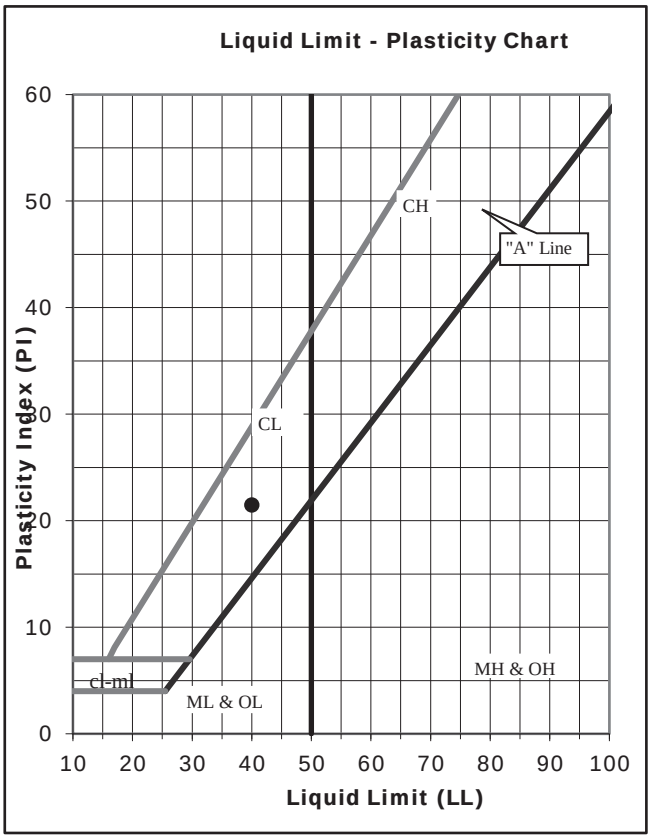
Project Name: FMC	Project Number: 3855.100
Sample ID: B7 at 1-1/2ft	Date Tested: 07/28/17
Material Description: CL Clay with Sand Dark Gray	Invoice Number: 15367

Summary of Test Results

Liquid Limit:	40	Plastic Limit:	19	Plasticity Index:	21
Classification:	CL Lean Clay				

	Liquid Limit					Plastic Limit		
Tare ID:	1A	1B	1E			D5	RC	
Number Of Blows:	31	24	15					
Tare Mass, (g):	11.62	11.55	11.52			19.38	14.83	
Wet Soil + Tare Mass, (g):	21.31	21.80	23.82			24.90	22.04	
Dry Soil + Tare Mass, (g):	18.60	18.89	20.22			24.04	20.91	
Moisture Content, %:	38.8	39.6	41.4			18.5	18.6	





Tested By: GS

Reported By: G Suckow

Berlogar Stevens & Associates Pleasanton, CA

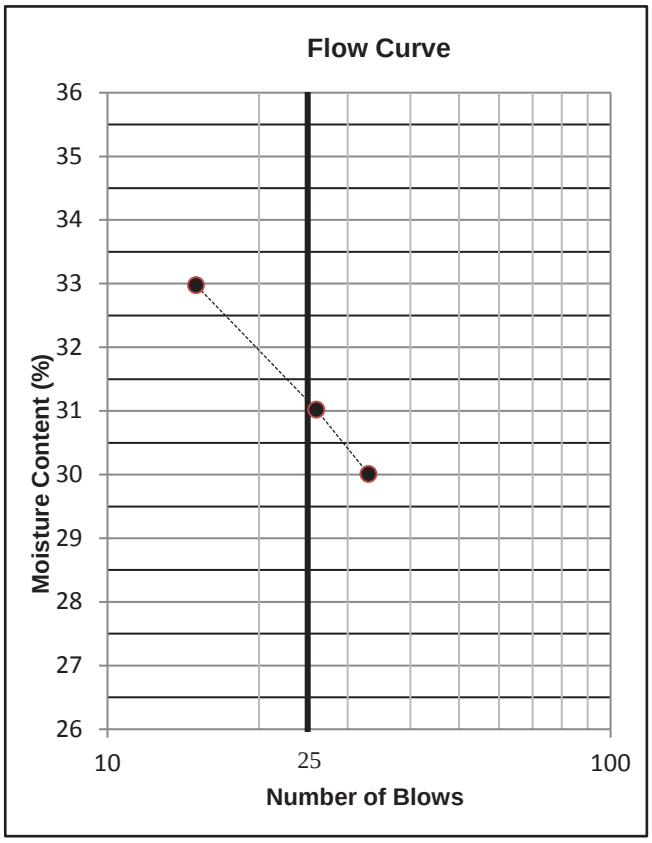
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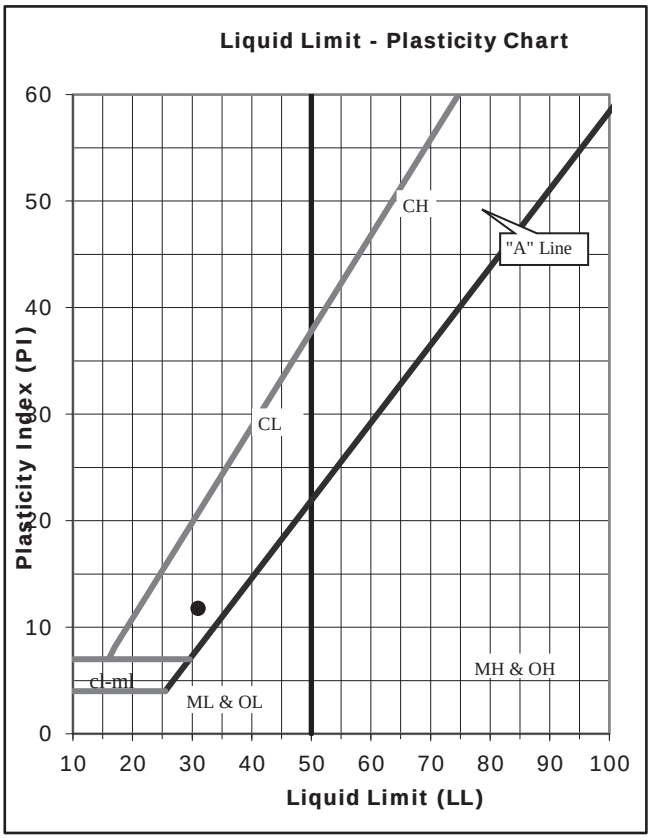
Project Name: Parcel C FMC	**Project Number:** 3855.100
Sample ID: B8 at 10-1/2ft	**Date Tested:** 07/18/17
Material Description: **CL Sandy Clay Light Brown Gray**	Invoice Number: 15355

Summary of Test Results

Liquid Limit:	**31**	**Plastic Limit:**	**19**	**Plasticity Index:**	**12**
Classification:	**CL Lean Clay**				

	Liquid Limit					Plastic Limit		
Tare ID:	6a	6b	6c			s1	r3	
Number Of Blows:	**33**	**26**	**15**					
Tare Mass, (g):	13.78	13.63	13.75			19.46	15.62	
Wet Soil + Tare Mass, (g):	24.48	24.78	24.92			27.07	25.67	
Dry Soil + Tare Mass, (g):	22.01	22.14	22.15			25.85	24.04	
Moisture Content, %:	**30.0**	**31.0**	**33.0**			**19.1**	**19.4**	





Tested By: gs

Reported By: G Suckow

Berlogar Stevens & Associates Pleasanton, CA

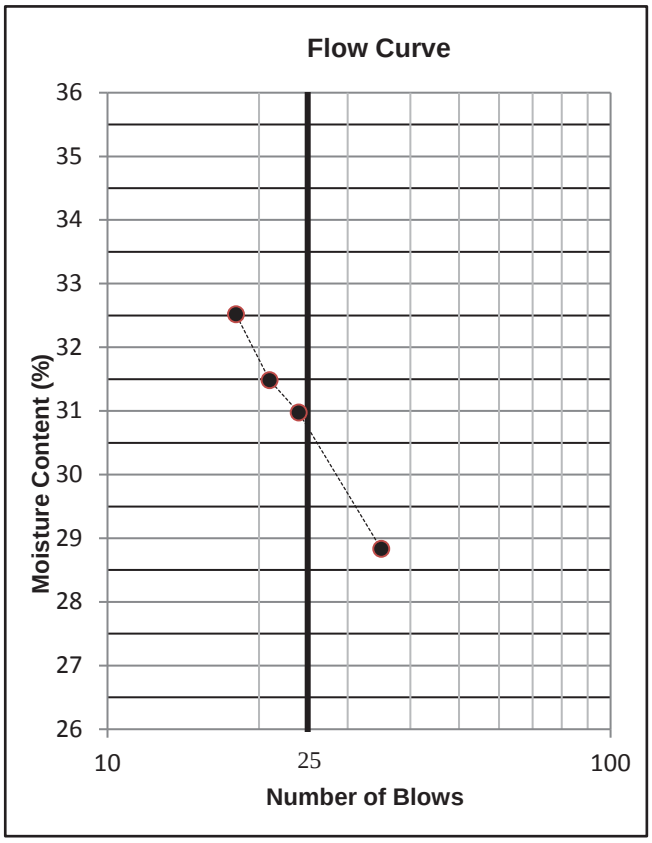
Atterberg Limits Test Data ASTM D 4318

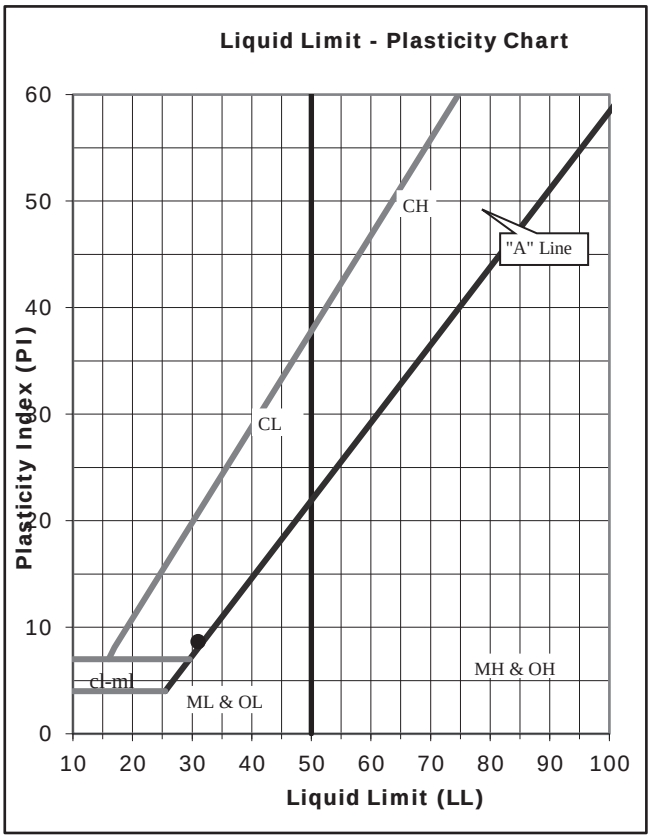
Project Name: Parcel C FMC	**Project Number:** 3855.100
Sample ID: B8 at 14-1/2ft	**Date Tested:** 07/17/17
Material Description: **CL Silty Clay Light Brown Gray**	Invoice Number: 15355

Summary of Test Results

Liquid Limit:	**31**	**Plastic Limit:**	**22**	**Plasticity Index:**	**9**
Classification:	**CL Lean Clay**				

	Liquid Limit					Plastic Limit		
Tare ID:	1e	1d	1b	1t		1a	1n	
Number Of Blows:	**35**	**24**	**21**	**18**				
Tare Mass, (g):	11.67	11.58	11.59	11.53		11.61	11.61	
Wet Soil + Tare Mass, (g):	20.83	20.29	23.45	19.68		23.37	22.74	
Dry Soil + Tare Mass, (g):	18.78	18.23	20.61	17.68		21.23	20.70	
Moisture Content, %:	**28.8**	**31.0**	**31.5**	**32.5**		**22.2**	**22.4**	





Tested By: gs

Reported By: G Suckow

Berlogar Stevens & Associates Pleasanton, CA

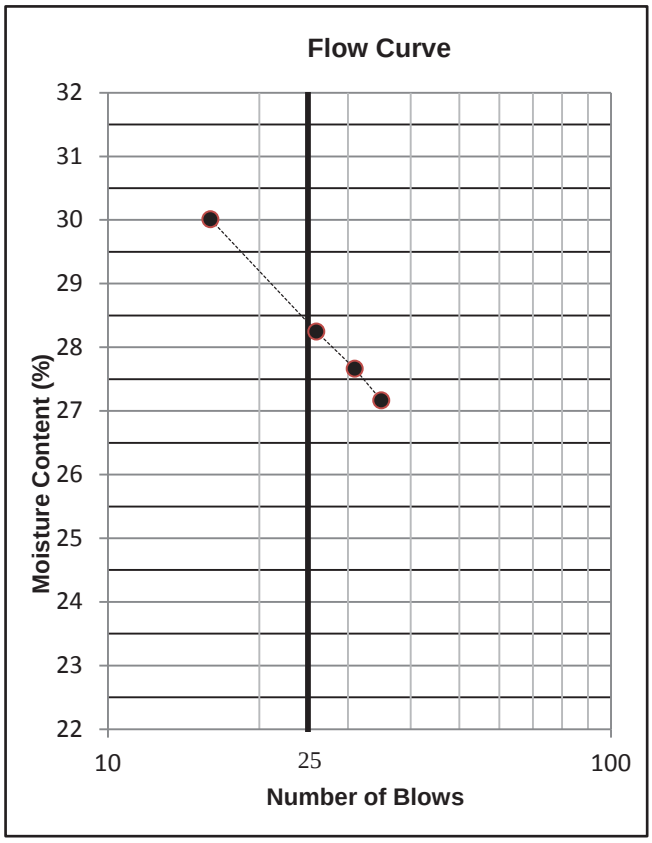
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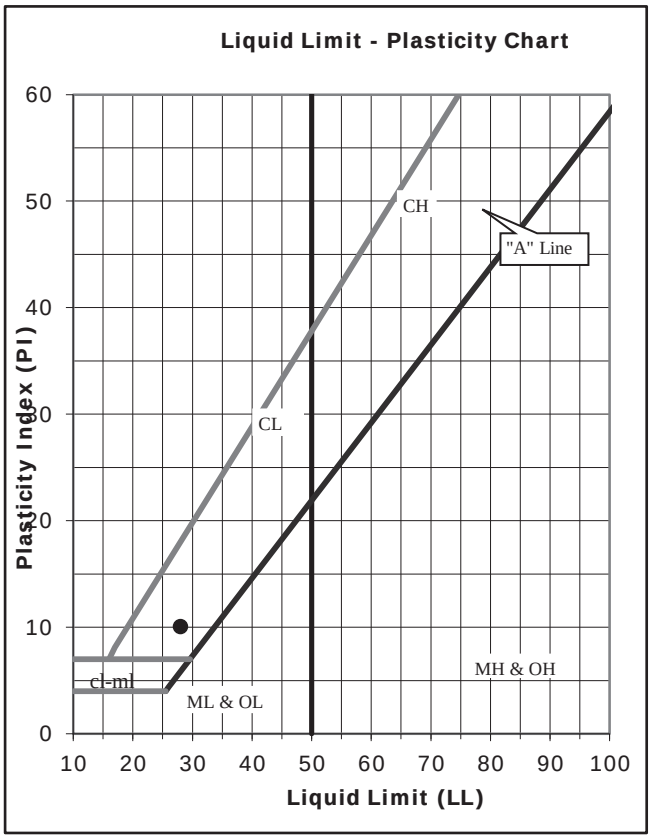
Project Name: Parcel C FMC	**Project Number:** 3855.100
Sample ID: B14 at 10ft	**Date Tested:** 07/11/17
Material Description: **CL Silty Clay with Sand Light Brown**	Invoice Number: 15345

Summary of Test Results

Liquid Limit:	**28**	**Plastic Limit:**	**18**	**Plasticity Index:**	**10**
Classification:	**CL Lean Clay**				

	Liquid Limit					Plastic Limit		
Tare ID:	6a	6b	6c	6g		6n	6m	
Number Of Blows:	**35**	**31**	**26**	**16**				
Tare Mass, (g):	13.76	13.70	13.83	13.75		13.90	13.90	
Wet Soil + Tare Mass, (g):	24.34	22.70	24.50	25.88		23.35	25.33	
Dry Soil + Tare Mass, (g):	22.08	20.75	22.15	23.08		21.93	23.57	
Moisture Content, %:	**27.2**	**27.7**	**28.2**	**30.0**		**17.7**	**18.2**	





Tested By: gs

Reported By: G Suckow

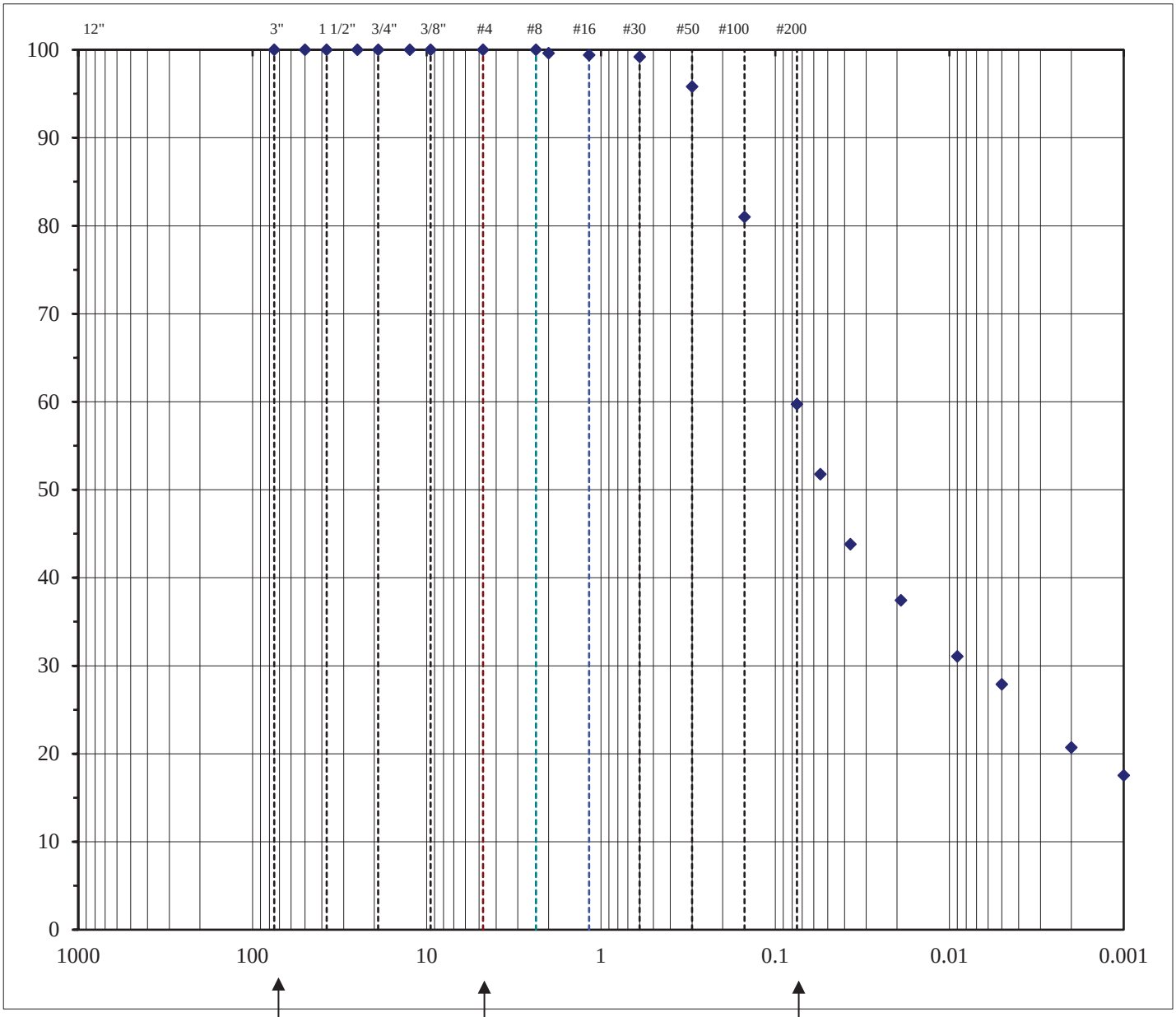
Berlogar Stevens & Associates Pleasanton, CA

Gradation Test Data ASTM D 422

Project Name: FMC	**Project No: 3855.100**
Comments:	**Date:** 7/24/2017
	Invoice Number: 15367

Tested By: gs

Reported By: G. Suckow



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

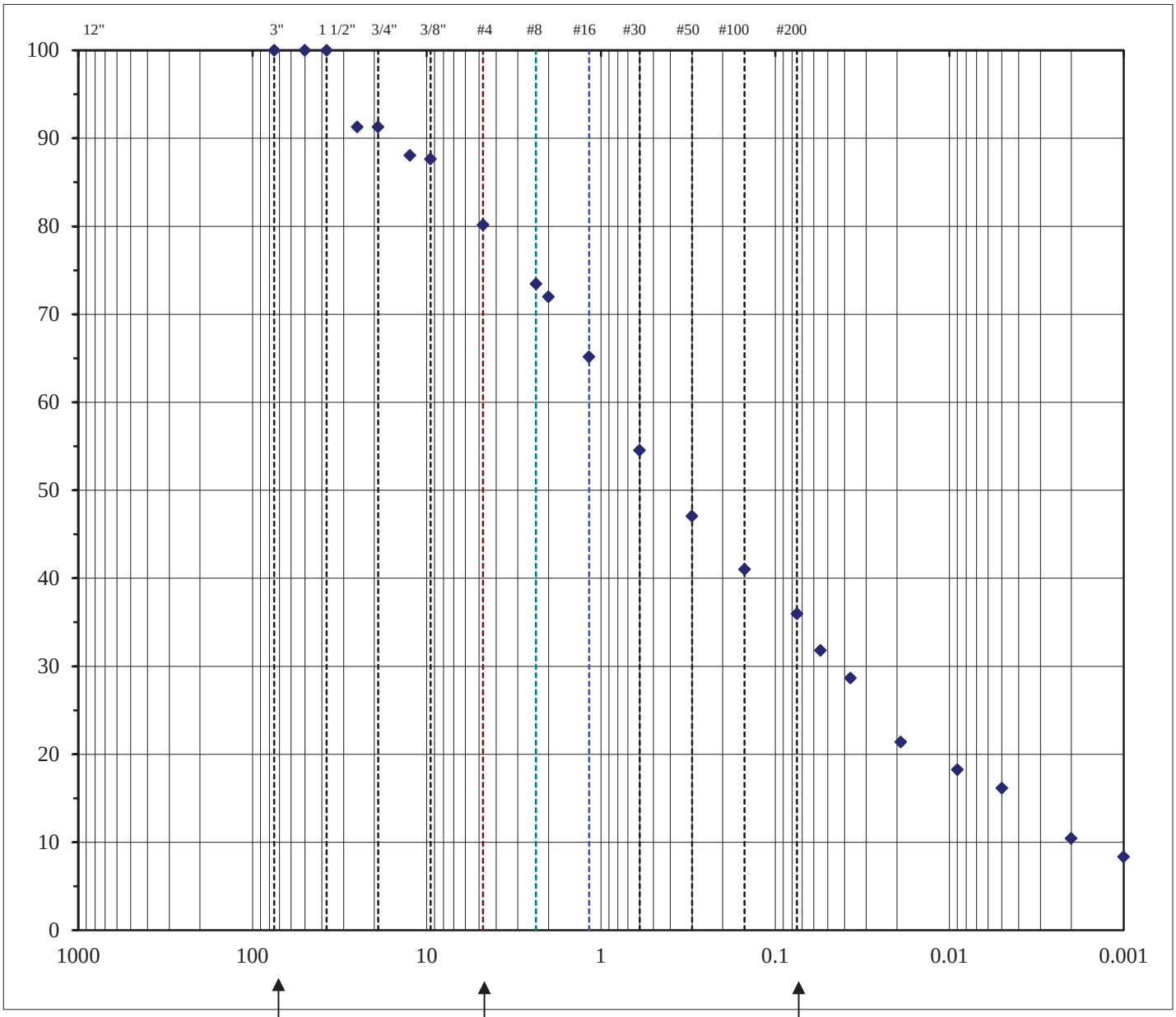
Symbol	Sample ID	Description	ASTM D4318 Plasticity Index:
	B1 at 2ft	CL Sandy Clay Dark Gray	10

Gradation Test Data ASTM D 422

Project Name: Parcel C FMC	**Project No: 3855.100**
Comments:	**Date:** 7/10/2017
	Invoice Number: 15345

Tested By: gs

Reported By: G. Suckow



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

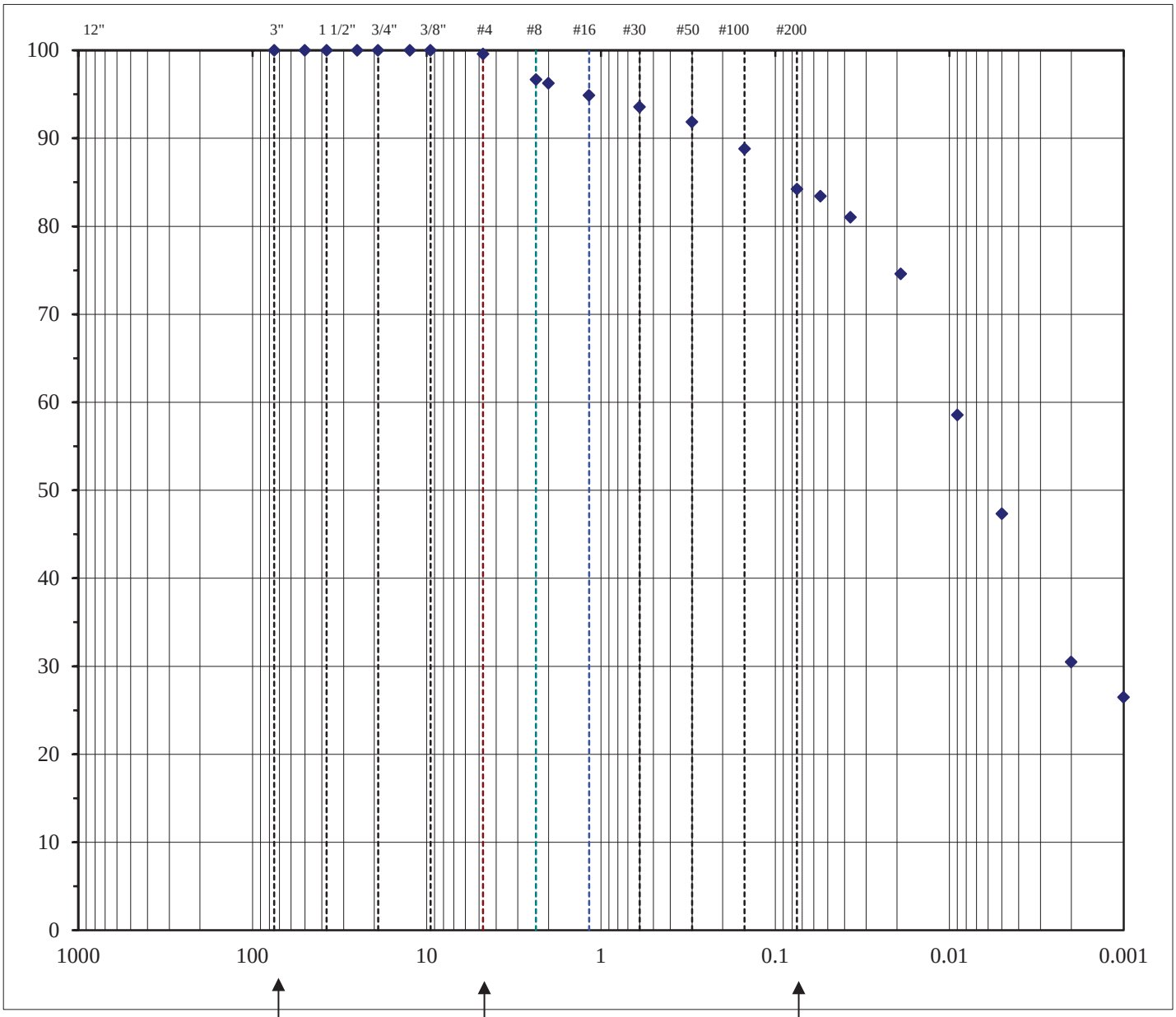
Symbol	Sample ID	Description	ASTM D4318 Plasticity Index:
	B4 at 2ft	SC Clayey Sand with Gravel Dark Brown	14

Gradation Test Data ASTM D 422

Project Name: Parcel C FMC	**Project No: 3855.100**
Comments:	**Date:** 7/10/2017
	Invoice Number: 15345

Tested By: gs

Reported By: G. Suckow



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

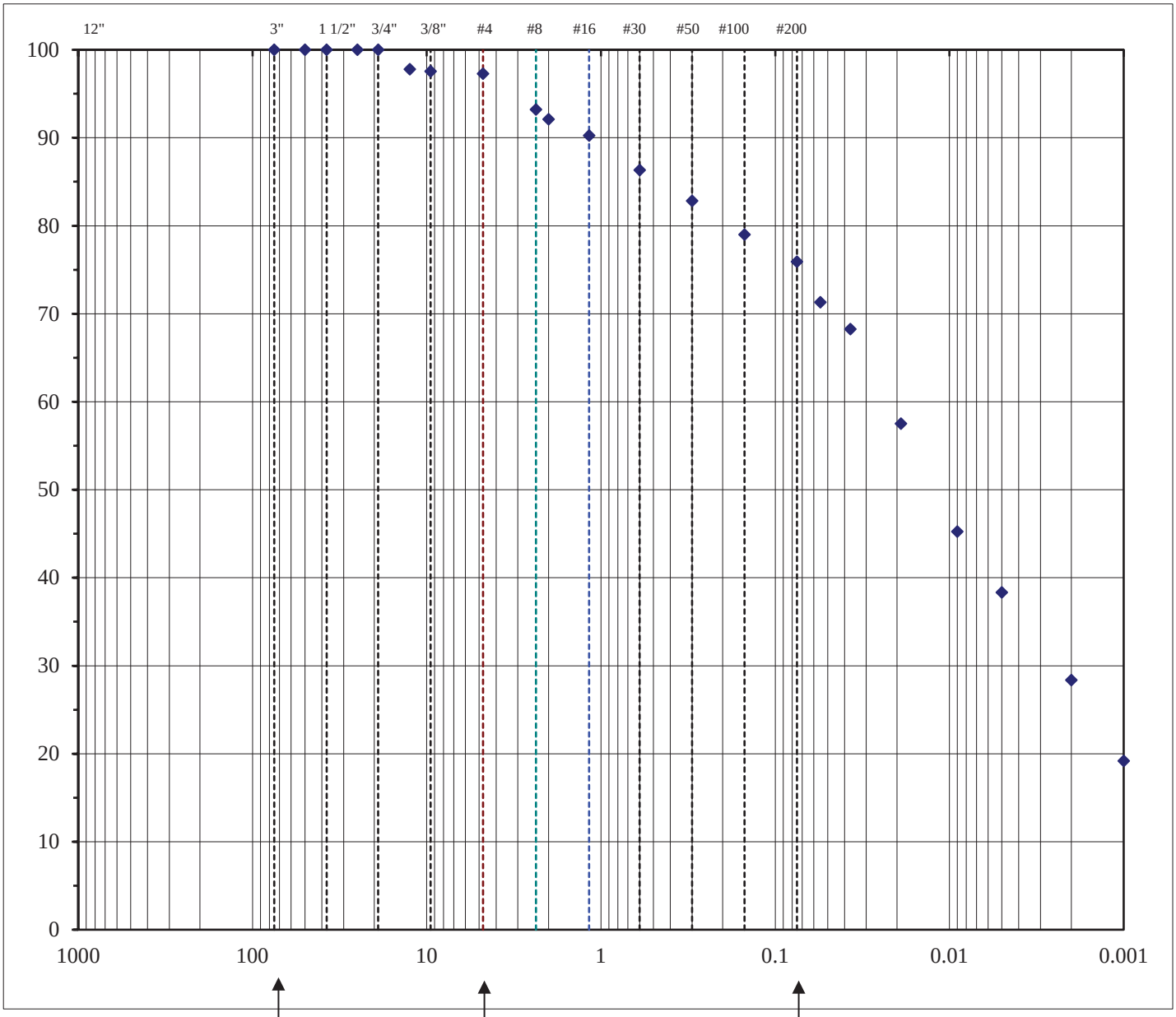
Symbol	Sample ID	Description	ASTM D4318 Plasticity Index:
	B6 at 1/2ft	CL Silty Clay with Sand Dark Gray Brown	23

Gradation Test Data ASTM D 422

Project Name: FMC	**Project No: 3855.100**
Comments:	**Date:** 7/24/2017
	Invoice Number: 15367

Tested By: gs

Reported By: G. Suckow



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

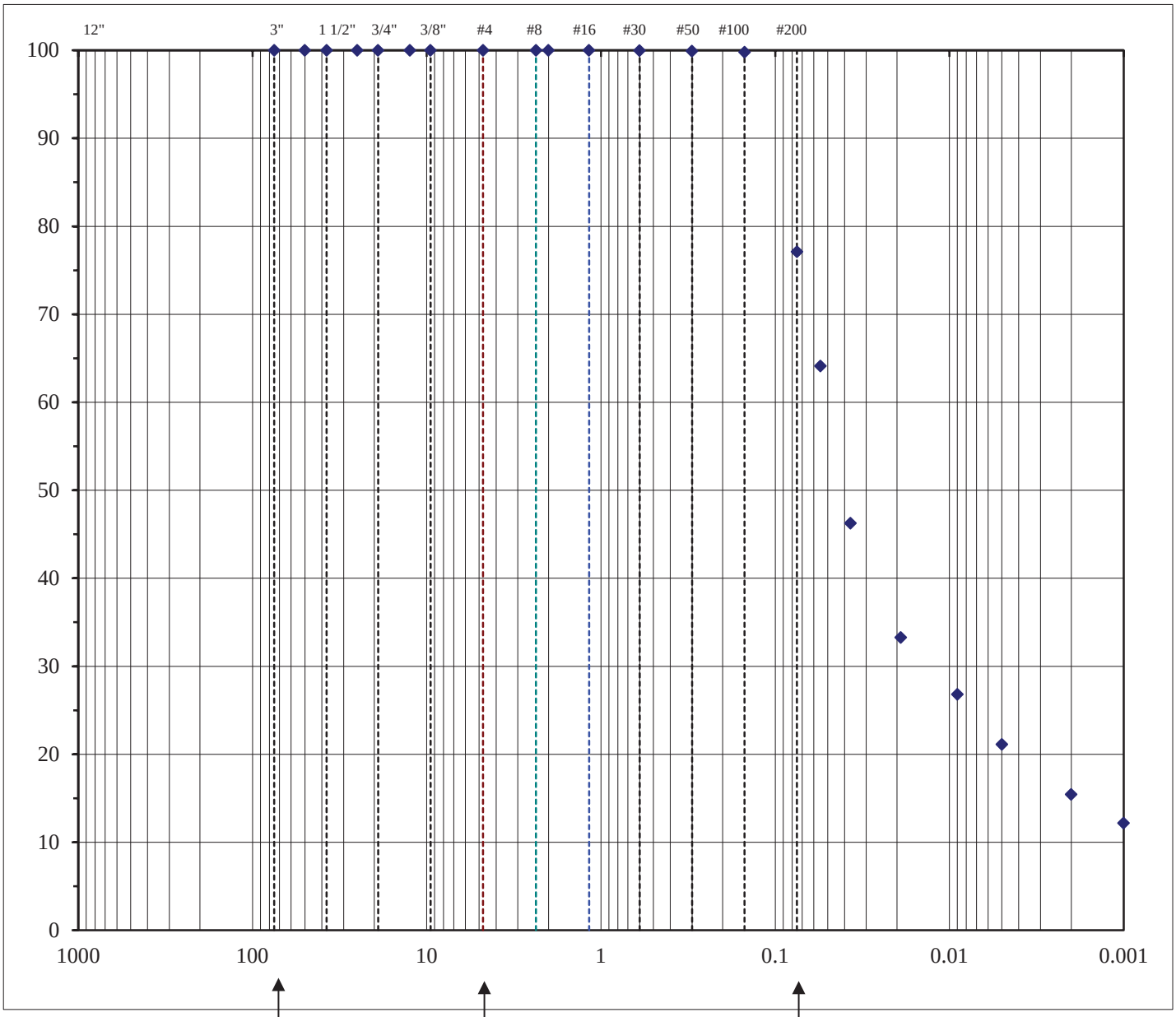
Symbol	Sample ID	Description	ASTM D4318 Plasticity Index:
	B7 at 1-1/2ft	CL Clay with Sand Dark Gray	21

Gradation Test Data ASTM D 422

Project Name: Parcel C FMC	**Project No: 3855.100**
Comments:	**Date:** 7/10/2017
	Invoice Number: 15345

Tested By: gs

Reported By: G. Suckow



COBBLES	GRAVEL		SAND			SILT/CLAY
	coarse	fine	coarse	medium	fine	

Symbol	Sample ID	Description	ASTM D4318 Plasticity Index:
	B14 at 10ft	CL Silty Clay with Sand Light Brown	10

ASTM D-2166 Unconfined
Compressive Strength of Cohesive Soils

Project Name: Parcel C FMC	Project Number: 3855.100
Sample ID: B7 at 3ft	Invoice Number: 15345
Sample Description: Silty Clay Dark Gray with Light Brown Mix Caliche	Date Tested: 07/10/17
Comments:	

Summary of Results

Max. Stress, psf:	Strain at Failure, %:	Dry Density, pcf: 87.0	Moist. Content, %: 31.1

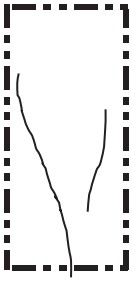
Test Data

Strain Gauge Reading, inches:	Load, lbs:	Percent Strain, %:	Stress, psf:	Strain Gauge Reading, inches:	Load, lbs:	Percent Strain, %:	Stress, psf:
0.000	0.0	-	0	0.300			
0.010	3.0	0.2	94	0.340			
0.020	4.9	0.4	153	0.380			
0.030	6.1	0.6	190	0.420			
0.040	7.8	0.7	242	0.460			
0.050	9.3	0.9	288	0.500			
0.060	10.7	1.1	331	0.540			
0.070	12.1	1.3	374	0.580			
0.080	12.9	1.5	398	0.620			
0.090	13.6	1.7	419	0.660			
0.100	13.9	1.8	427	0.700			
0.120	14.4	2.2	441	0.740			
0.140	14.5	2.6	442	0.780			
0.160	13.9	2.9	422	0.820			
0.180	13.2	3.3	400	0.860			
0.200				0.900			
0.220							
0.240							
0.260							
0.280							

Sample Data

Sample Diameter, inch:	2.420
Wet Sample Mass, (g):	747.5
Sample Height, inch:	5.430
Wet Density, pcf:	114.0
Tare ID:	812
Tare Mass, (g):	111.3
Tare + Wet Sample Mass,(g):	857.4
Tare + Dry Sample Mass, (g):	680.6

Sketch of Failure



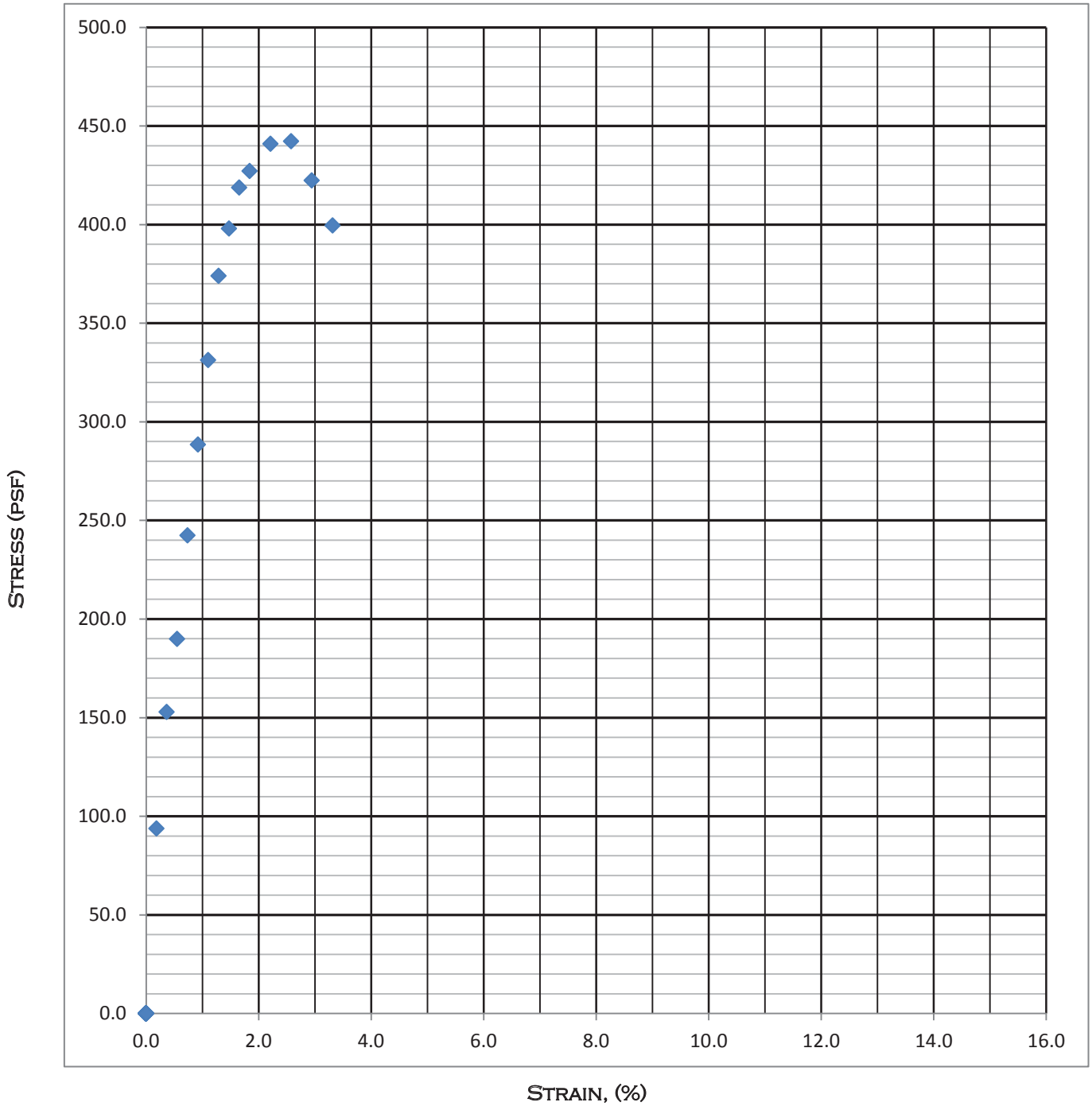
Reported By: G Suckow

Tested By: gs

ASTM D-2166 Unconfined
Compressive Strength of Cohesive Soils

Project Name: Parcel C FMC	Project Number: 3855.100
Sample ID: B7 at 3ft	Invoice Number: 15345
Sample Description: Silty Clay Dark Gray with Light Brown Mix Caliche	Date Tested:
Comments: 0	

Stress vs Strain Curve



Reported By: G Suckow

Tested By: GS

ASTM D-2166 Unconfined
Compressive Strength of Cohesive Soils

Project Name: Parcel C FMC	Project Number: 3855.100
Sample ID: B9 at 2-1/2ft	Invoice Number: 15345
Sample Description: Silty ClayDark Gray Brown	Date Tested: 07/10/17
Comments:	

Summary of Results

Max. Stress, psf:	Strain at Failure, %:	Dry Density, pcf: 99.6	Moist. Content, %: 22.5

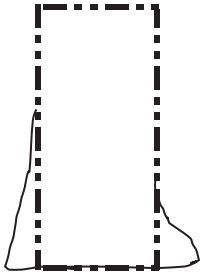
Test Data

Strain Gauge Reading, inches:	Load, lbs:	Percent Strain, %:	Stress, psf:	Strain Gauge Reading, inches:	Load, lbs:	Percent Strain, %:	Stress, psf:
0.000	0.0	-	0	0.300	35.5	5.0	1,056
0.010	8.9	0.2	278	0.340	37.4	5.7	1,105
0.020	11.2	0.3	349	0.380	39.1	6.3	1,147
0.030	13.0	0.5	405	0.420	40.8	7.0	1,188
0.040	14.5	0.7	451	0.460	42.6	7.7	1,231
0.050	16.1	0.8	500	0.500	44.1	8.3	1,266
0.060	17.6	1.0	545	0.540	45.6	9.0	1,299
0.070	19.0	1.2	588	0.580	47.6	9.7	1,346
0.080	20.0	1.3	618	0.620	49.0	10.3	1,376
0.090	21.0	1.5	648	0.660	50.4	11.0	1,404
0.100	22.1	1.7	680	0.700	51.7	11.7	1,430
0.120	23.9	2.0	733	0.740	53.0	12.3	1,455
0.140	25.6	2.3	783	0.780	54.4	13.0	1,482
0.160	27.1	2.7	826	0.820	55.5	13.7	1,500
0.180	28.6	3.0	869	0.860	57.0	14.3	1,529
0.200	29.8	3.3	902	0.900			
0.220	31.1	3.7	938				
0.240	32.3	4.0	971				
0.260	33.4	4.3	1,000				
0.280	34.6	4.7	1,033				

Sample Data

Sample Diameter, inch:	2.420
Wet Sample Mass, (g):	884.3
Sample Height, inch:	6.000
Wet Density, pcf:	122.1
Tare ID:	837
Tare Mass, (g):	110.6
Tare + Wet Sample Mass,(g):	993.5
Tare + Dry Sample Mass, (g):	831.1

Sketch of Failure



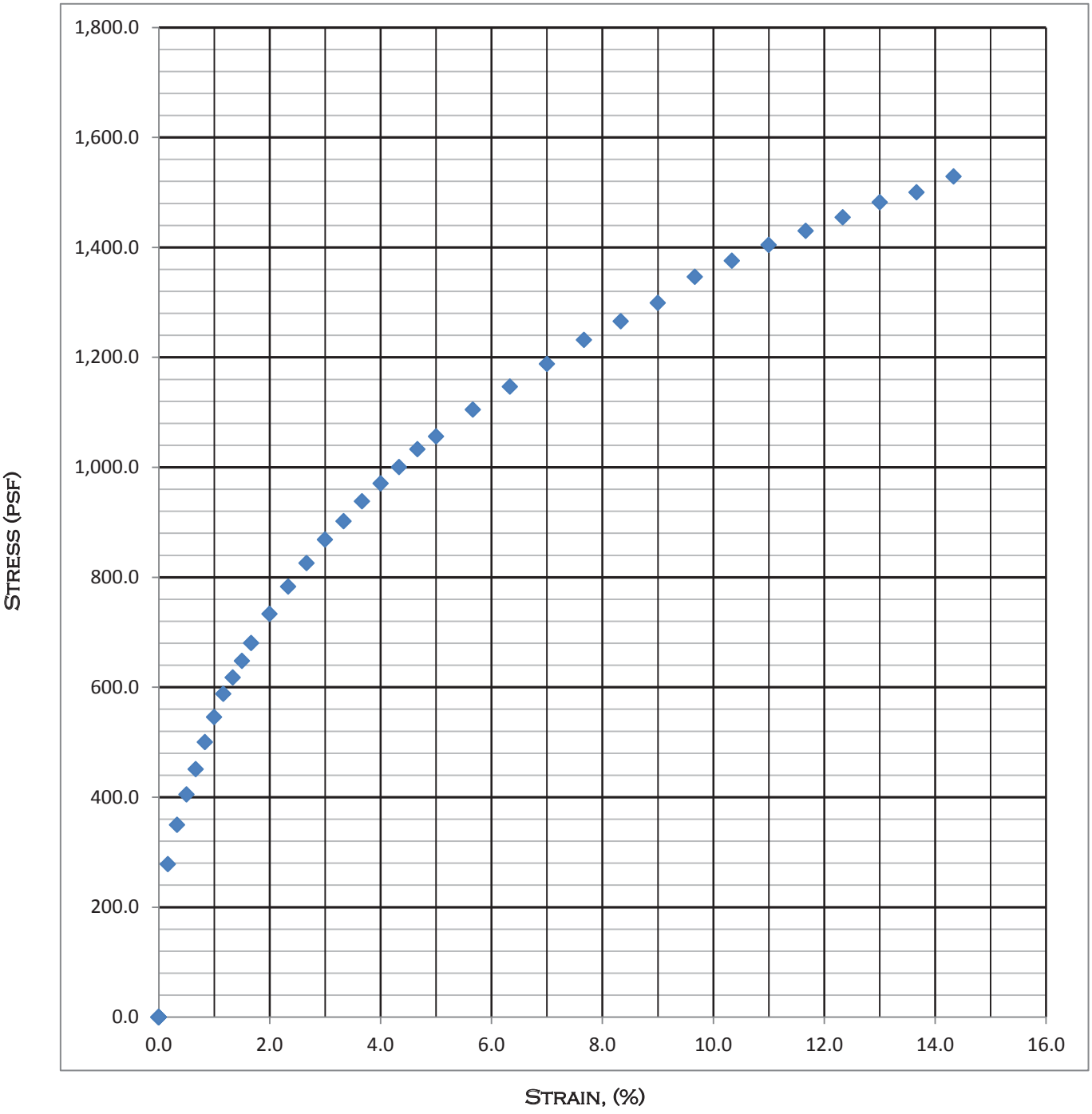
Reported By: G Suckow

Tested By: gs

ASTM D-2166 Unconfined
Compressive Strength of Cohesive Soils

Project Name: Parcel C FMC	Project Number: 3855.100
Sample ID: B9 at 2-1/2ft	Invoice Number: 15345
Sample Description: Silty ClayDark Gray Brown	Date Tested:
Comments: 0	

Stress vs Strain Curve



Reported By: G Suckow

Tested By: GS

ASTM D-2166 Unconfined
Compressive Strength of Cohesive Soils

Project Name: Parcel C FMC	Project Number: 3855.100
Sample ID: B10 at 4ft	Invoice Number: 15345
Sample Description: Silty Clay Dark Gray Brown	Date Tested: 07/10/17
Comments:	

Summary of Results

Max. Stress, psf:	Strain at Failure, %:	Dry Density, pcf: 103.1	Moist. Content, %: 21.5

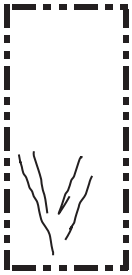
Test Data

Strain Gauge Reading, inches:	Load, lbs:	Percent Strain, %:	Stress, psf:	Strain Gauge Reading, inches:	Load, lbs:	Percent Strain, %:	Stress, psf:
0.000	0.0	-	0	0.300	69.8	5.9	2,055
0.010	9.8	0.2	306	0.340	73.5	6.7	2,146
0.020	14.8	0.4	462	0.380	76.7	7.5	2,221
0.030	19.4	0.6	604	0.420	79.3	8.3	2,276
0.040	22.7	0.8	705	0.460	81.1	9.1	2,308
0.050	26.3	1.0	815	0.500	82.3	9.9	2,321
0.060				0.540	83.6	10.7	2,337
0.070	32.3	1.4	997	0.580	83.6	11.5	2,317
0.080	34.9	1.6	1,075	0.620	82.8	12.3	2,274
0.090	37.0	1.8	1,138	0.660	81.1	13.1	2,207
0.100	39.5	2.0	1,212	0.700			
0.120	43.8	2.4	1,339	0.740			
0.140	48.0	2.8	1,461	0.780			
0.160	52.0	3.2	1,576	0.820			
0.180	55.3	3.6	1,670	0.860			
0.200	58.5	4.0	1,759	0.900			
0.220	61.4	4.4	1,839				
0.240	64.8	4.8	1,932				
0.260	66.4	5.1	1,972				
0.280	67.8	5.5	2,005				

Sample Data

Sample Diameter, inch:	2.420
Wet Sample Mass, (g):	763.9
Sample Height, inch:	5.050
Wet Density, pcf:	125.3
Tare ID:	849
Tare Mass, (g):	109.9
Tare + Wet Sample Mass,(g):	872.1
Tare + Dry Sample Mass, (g):	737.1

Sketch of Failure



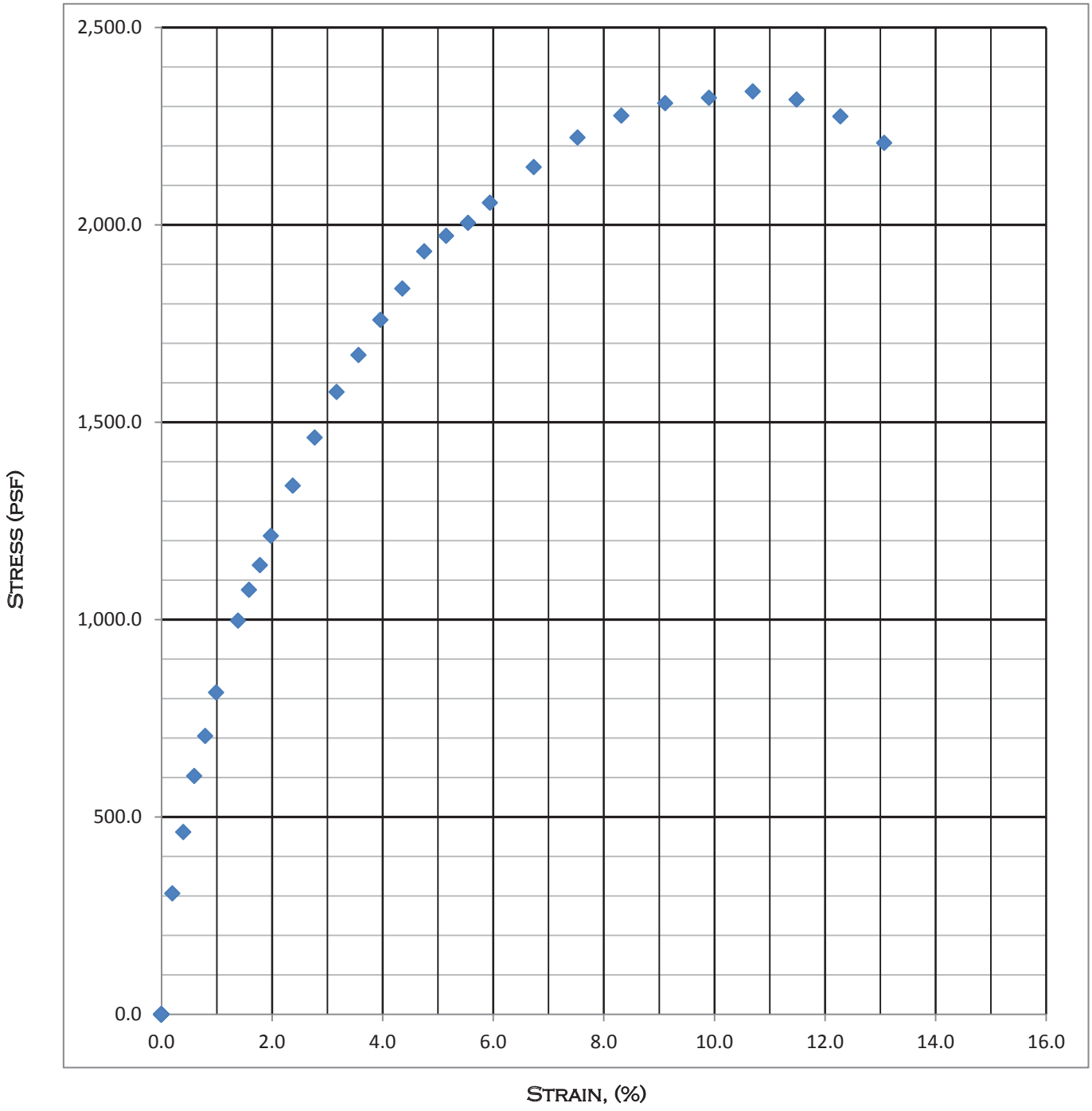
Reported By: G Suckow

Tested By: gs

ASTM D-2166 Unconfined
Compressive Strength of Cohesive Soils

Project Name: Parcel C FMC	Project Number: 3855.100
Sample ID: B10 at 4ft	Invoice Number: 15345
Sample Description: Silty Clay Dark Gray Brown	Date Tested:
Comments: 0	

Stress vs Strain Curve



Reported By: G Suckow

Tested By: GS

ASTM D-2166 Unconfined
Compressive Strength of Cohesive Soils

Project Name: Parcel C FMC	Project Number: 3855.100
Sample ID: B11 at 4ft	Invoice Number: 15345
Sample Description: Silty Clay Gray	Date Tested: 07/10/17
Comments:	

Summary of Results

Max. Stress, psf:	Strain at Failure, %:	Dry Density, pcf: 98.2	Moist. Content, %: 25.5

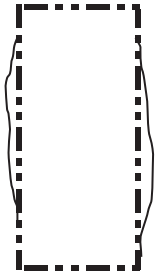
Test Data

Strain Gauge Reading, inches:	Load, lbs:	Percent Strain, %:	Stress, psf:	Strain Gauge Reading, inches:	Load, lbs:	Percent Strain, %:	Stress, psf:
0.000	0.0	-	0	0.300	32.1	5.1	954
0.010	7.0	0.2	219	0.340	34.5	5.8	1,018
0.020	10.1	0.3	315	0.380	36.9	6.5	1,081
0.030	11.0	0.5	343	0.420	39.3	7.1	1,143
0.040	12.1	0.7	376	0.460	42.0	7.8	1,212
0.050	13.1	0.8	407	0.500	44.2	8.5	1,266
0.060	13.9	1.0	431	0.540	46.4	9.2	1,319
0.070	15.0	1.2	464	0.580	48.7	9.8	1,375
0.080	16.0	1.4	494	0.620	50.7	10.5	1,420
0.090	17.0	1.5	524	0.660	52.5	11.2	1,459
0.100	17.6	1.7	542	0.700	54.2	11.9	1,495
0.120	19.3	2.0	592	0.740	55.6	12.6	1,522
0.140	20.7	2.4	633	0.780	57.0	13.2	1,548
0.160	22.2	2.7	676	0.820	58.5	13.9	1,576
0.180	23.6	3.1	716	0.860	59.9	14.6	1,601
0.200	25.1	3.4	759	0.900	61.1	15.3	1,621
0.220	26.5	3.7	799				
0.240	27.8	4.1	835				
0.260	29.2	4.4	874				
0.280	30.6	4.8	912				

Sample Data

Sample Diameter, inch:	2.420
Wet Sample Mass, (g):	875.9
Sample Height, inch:	5.890
Wet Density, pcf:	123.2
Tare ID:	830
Tare Mass, (g):	110.1
Tare + Wet Sample Mass,(g):	984.0
Tare + Dry Sample Mass, (g):	806.6

Sketch of Failure



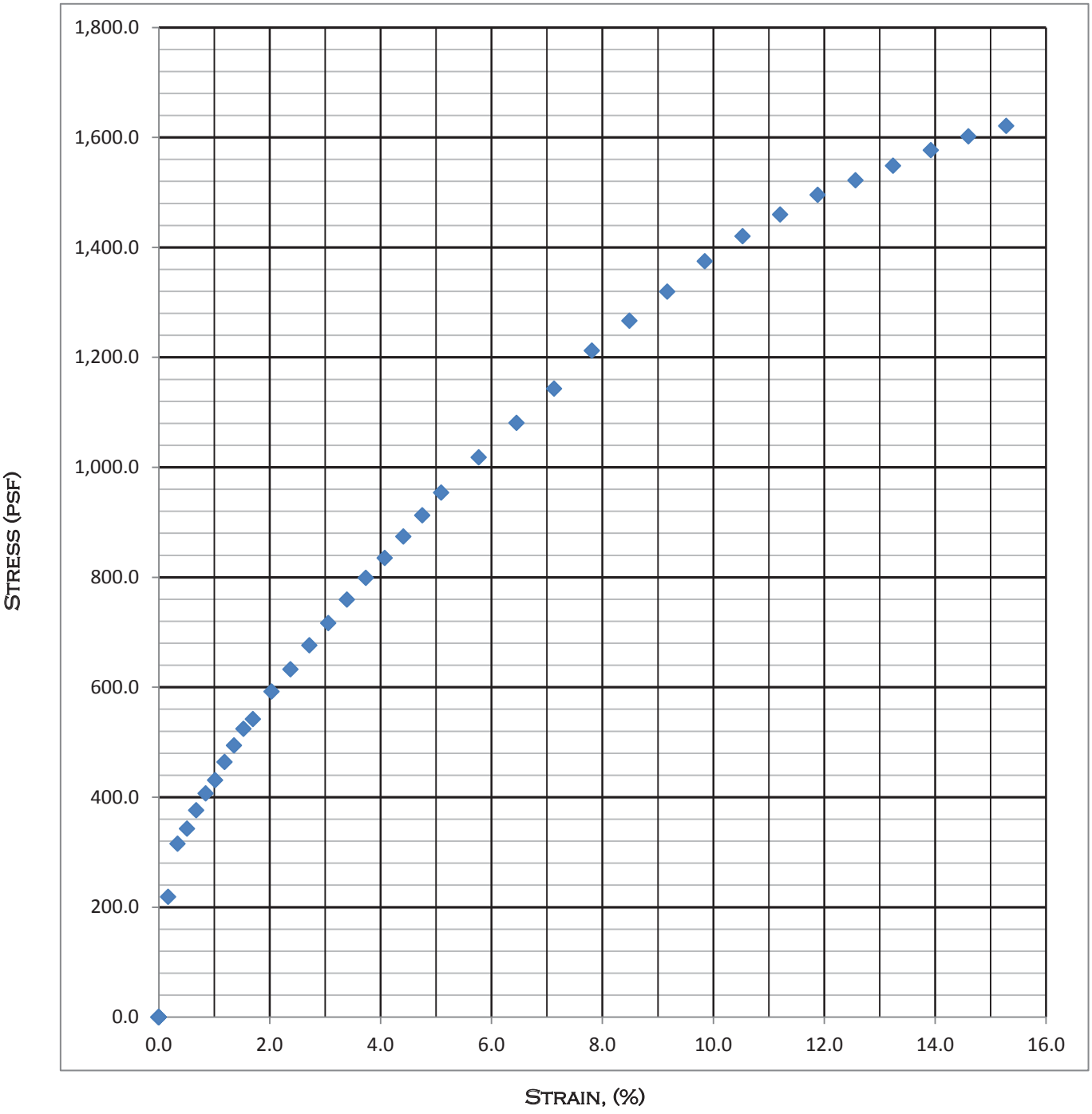
Reported By: G Suckow

Tested By: gs

ASTM D-2166 Unconfined
Compressive Strength of Cohesive Soils

Project Name: Parcel C FMC	Project Number: 3855.100
Sample ID: B11 at 4ft	Invoice Number: 15345
Sample Description: Silty Clay Gray	Date Tested:
Comments: 0	

Stress vs Strain Curve



Reported By: G Suckow

Tested By: GS

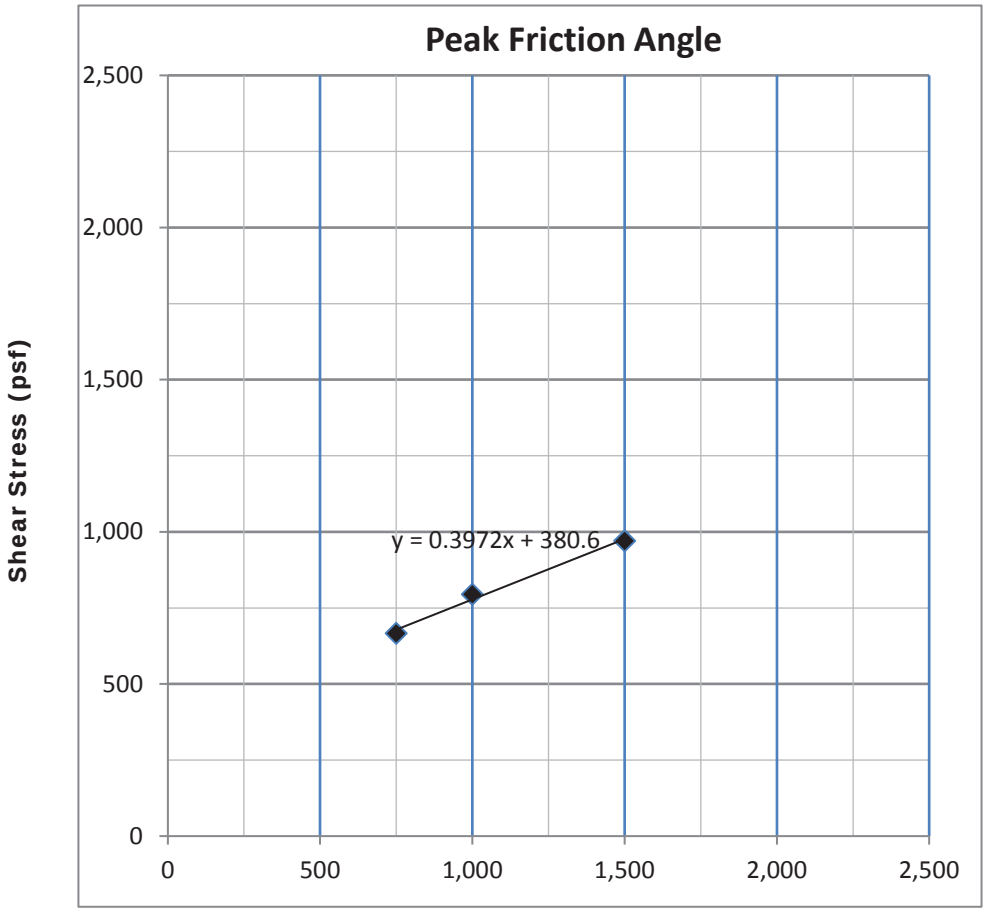
Direct Shear Worksheet ASTM D-3080

Project Name: Parcel C FMC			**Project Number: 3855.100**
Sample ID: B6 at 8.5 and B6 at 11.5ft			Date Tested: 07/07/17
Material Description: (At 8ft SM Silty Sand Brown Fine Grained) (At 11ft SP-SM Medium Sand Dark Gray)			Invoice Number: 15345
Sample Type: Undisturbed	Test Type: CD		Shear Rate, inches/min.: 0.00100
Maximum Dry Density, pcf: 0.0		Minimum Required Compaction, %: 0.0	
Optimum Moisture Content, %: 0.0		Minimum Compacted Moisture Content, %: 0.0	

Summary of Results

Normal Stress, psf:	**750**	**1,500**	**1,000**	
Peak Shear Stress, psf:	**667**	**971**	**795**	
Initial Dry Density, pcf:	**99.9**	**98.8**	**107.3**	
Initial Moisture Content, %:	**22.0**	**22.0**	**15.2**	
Final Moisture Content, %:	**27.5**	**25.4**	**17.7**	
Peak Cohesion, **(C')**, psf:	**380.6**	Peak Friction Angle, **(Φ'_{peak})**, Degrees:		**21.7**

Graph of Shear Stress vs Normal Stress



Berlogar Stevens & Associates Pleasanton, CA

Appendix F

Noise Assessment Technical Report

FMC Willow and Grand Park Project

Noise Assessment Technical Report

Prepared for:

City of Newark
Community Development Department
37101 Newark Boulevard
Newark, CA 94560

Prepared by:

HELIX Environmental Planning, Inc.
11 Natoma Street, Suite 155
Folsom, CA 95360

December 2021 | 00357.00037.001

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TABLE OF CONTENTS

Section **Page**

EXECUTIVE SUMMARY ES-1

1.0 INTRODUCTION 1

1.1 Purpose of the Report 1
1.2 Project Location 1
1.3 Project Description 1
1.4 Project Design Features 2
1.5 Construction Activities and Phasing 4

2.0 ENVIRONMENTAL SETTING 4

2.1 Noise and Sound Level Descriptors and Terminology 4
2.2 Noise and Vibration Sensitive Land Uses 5
2.3 Regulatory Framework 5
2.3.1 City of Newark General Plan 5
2.3.2 City of Newark Municipal Code 6
2.4 Existing Conditions 8
2.4.1 Existing Noise Conditions 8

3.0 METHODOLOGY, ASSUMPTIONS, AND THRESHOLDS 10

3.1 Equipment and Methodology 10
3.1.1 Ambient Noise Survey 10
3.1.2 Noise Modeling Software 10
3.2 Assumptions 11
3.2.1 Construction 11
3.2.2 Operation 11
3.2.3 Train Noise and Vibration 12
3.2.4 Bus Noise 13
3.3 Significance Criteria 13

4.0 IMPACTS 14

4.1 PEIR Impact 4.10-1 14
4.1.1 Short-Term Construction Noise Impact Conclusions in the PEIR 14
4.1.2 Project Specific Short-Term Construction Noise Impact Analysis 15
4.2 PEIR Impact 4.10-2 17
4.2.1 Vibration Impact Conclusions in the PEIR 17
4.2.2 Project Specific Vibration Impact Analysis 17
4.3 PEIR Impact 4.10-3 19
4.3.1 Impacts from Residential Sources Conclusions in the PEIR 19
4.3.2 Project-Specific Residential Sources Analysis 19
4.3.3 Impacts from Non-Residential Sources Conclusions in the PEIR 19
4.3.4 Project-Specific Non-Residential Sources Analysis 20

TABLE OF CONTENTS (cont.)

Section **Page**

4.3.5 Impacts from Train Noise Conclusions in the PEIR 20
4.3.6 Project-Specific Train Noise Analysis 20
4.3.7 Impacts from Airport Noise Conclusions in the PEIR 22
4.3.8 Project-Specific Airport Noise Analysis 22
4.4 PEIR Impact 4.10-4 22
4.4.1 Traffic Noise Conclusions in the PEIR 22
4.4.2 Project-Specific Traffic Noise Analysis 22
4.5 PEIR Impact 4.10-5 24
4.5.1 Cumulative Traffic Noise Impact Conclusions in the PEIR 24
4.5.2 Project-Specific Cumulative Traffic Noise Analysis 24

5.0 LIST OF PREPARERS 25

6.0 REFERENCES 26

LIST OF APPENDICES

A Noise Measurement Sheets
B Train Vibration Calculations
C Project Residence Noise Modeling Output
D FTA Rail Model Output

LIST OF FIGURES

No. **Title** **Follows Page**

1 Vicinity Map 2
2 Aerial Map 2
3 Site Design 2
4 Modeled Receiver Locations 10

LIST OF TABLES

No. **Title** **Page**

1 Short-Term Noise Measurement Results 9
2 Project Traffic Volumes 11
3 Predicted Car and Bus Noise for Project Residences 20
4 Off-site Traffic Noise Levels 23
5 Predicted Traffic for Project Residences 24

ACRONYMS AND ABBREVIATIONS

AC Transit	Alameda County Transit District
ADT	average daily trips
ANSI	American National Standards Institute
CadnaA	Computer Aided Noise Abatement
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Newark
CNEL	Community Noise Equivalent Level
County	County of Alameda
dB	decibel
dBA	A-weighted decibel
DMU	diesel multiple unit
DRC	Dumbarton Rail Corridor
DRS	Dumbarton Rail Service
DTCS	Dumbarton Transportation Corridor Study
DU	dwelling unit
FTA	Federal Transit Administration
hp	horsepower
HVAC	heating, ventilation, and air conditioning
Hz	hertz
kHz	kilohertz
L_{DN}	Day-Night sound level
L_{EQ}	time-averaged noise level
mph	miles per hour
mPa	micro Pascal
NSLU	noise sensitive land use
PEIR	Bayside Newark TOD Specific Plan Program Environmental Impact Report
PPV	peak particle velocity
rpm	revolutions per minute

ACRONYMS AND ABBREVIATIONS (cont.)

SamTrans	San Mateo County Transit District
SF	square feet
Specific Plan	Bayside Newark Transit Oriented Development Specific Plan
SPL	sound pressure level
STC	Sound Transmission Class
S_{WL}	Sound Power Level
TNM	Traffic Noise Model
TOD	Transit Oriented Development
USDOT	U.S. Department of Transportation
VdB	vibration velocity decibels

EXECUTIVE SUMMARY

This report presents an assessment of potential construction and operational noise impacts associated with the proposed FMC Willow and Grand Park (project) located in the Bayside Newark Transit Oriented Development (TOD) Specific Plan (Specific Plan) Area in the City of Newark (City). This report also compares the project-specific impact conclusions with those evaluated in the Bayside Newark TOD Specific Plan Program EIR (PEIR), formerly known as the Dumbarton TOD Specific Plan. The project would develop the 22.1-acre site within the Bayside Newark TOD Specific Plan Area with 370 townhomes and affordable housing units and 4,000 square feet of local-serving commercial space. The project would also develop the 5-acre Grand Park in the western portion of the project site. The project would dedicate 1.8 acres of land for a transit station for potential future passenger rail service on the Dumbarton Corridor.

The project would comply with the applicable mitigation measures pertaining to noise included in the Bayside Newark TOD Specific Plan PEIR, which this project analysis is tiered from.

Project construction activities would be limited by mitigation from the PEIR to the hours between 7:00 a.m. to 7:00 p.m., Monday through Friday, and between 8:00 a.m. to 5:00 p.m. on Saturdays. Impacts related to construction noise would be less than significant with mitigation.

Project-generated traffic would not cause a significant increase to noise levels at off-site residences. Traffic and bus noise levels would not exceed the City exterior residential noise standard for project residences along Willow Street and Enterprise Drive.

Assuming that a “quiet zone” would be implemented, the project’s residences would not be subject to exterior noise levels from potential future passenger rail service on the Dumbarton Rail Corridor in excess of the City’s standard for multi-family exterior spaces. The project’s residences could be subject to rail vibration from future use of the Dumbarton Rail Corridor. However, these vibration levels would not exceed Federal Transit Administration (FTA) significant vibration impact criteria.

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1.0 INTRODUCTION

1.1 PURPOSE OF THE REPORT

This report analyzes potential noise and vibration impacts associated with the proposed FMC Willow and Grand Park Project (project).

The proposed project site is within the Bayside Newark TOD Specific Plan area (formerly known as the Dumbarton TOD Specific Plan, and the PEIR for the Specific Plan (State Clearinghouse No. 2010042012) serves as the foundation document for subsequent projects proposed under the program. The Specific Plan area encompasses approximately 205 acres in the vicinity of the future Dumbarton Rail Corridor (DRC). The purpose of the Bayside Newark TOD Specific Plan is to facilitate the development of a new neighborhood around a train station planned separately as part of the Dumbarton Rail Service (DRS) Project. The DRS is still under development and will undergo separate environmental analysis in accordance with the California Environmental Quality Act (CEQA). The proposed project is being analyzed in light of the prior certified Bayside Newark TOD Specific Plan PEIR as the next step in the City's CEQA process for implementation of projects within the approved Bayside Newark TOD Specific Plan.

1.2 PROJECT LOCATION

The proposed project site is located within the City of Newark (City) in southwestern Alameda County (County), northwest of the intersection of Willow Street and Enterprise Drive (see Figure 1, *Vicinity Map*, and Figure 2, *Aerial Map*).

1.3 PROJECT DESCRIPTION

The approximately 22.1-acre project site would be developed with high-density residential buildings, medium-density residential units, and commercial retail space in four Planning Areas (PAs), a community park (Grand Park), a bus stop, and a future transit station site. PA1, in the eastern portion of the project site, would contain one six-story mixed-use building with 90 multi-family affordable housing units plus 1 manager unit in five floors over approximately 4,000 square feet (SF) of ground-floor commercial retail space. PA2, in the northern portion of the project site, would contain 64 single-family town homes in 12 buildings. PA3 would contain 123 single-family town homes in 16 buildings located in the southern portion of the project site. PA4 would contain 92 single-family town homes in 14 buildings located in the central/southern portion of the project site. PA4 would also include a 1,485-sf community building located on the eastern edge of the Grand Park. The total project dwelling units (DU) would be 370. The proposed project would dedicate 1.8 acres of land for a Transit Station with a potential future commuter rail platform north of PA1 and PA2. The proposed project would dedicate 1.8 acres of land for a Transit Station with a potential future commuter rail platform north of PA1 and PA2. The project would include the construction of a four-lane entrance road to the transit station and other interim improvements to the transit station site. The approximately 5-acre Grand Park would be located in the western portion of the project site. Other project improvements would include: internal streets, driveways, and surface parking areas; underground utilities and storm drains; internal public area landscaping; a pedestrian trail along the northern project site boundary; sidewalks and landscaping along Enterprise Drive and Willow Street; and provide a 20-foot-wide trail corridor, containing a 12-foot-wide multi-purpose trail, that would transect the Grand Park and run along Enterprise Drive to Willow Street. It is anticipated that the

proposed trail would be eligible to be part of the regional San Francisco Bay Trail (see Figure 3, *Site Design*).

1.4 PROJECT DESIGN FEATURES

The project would comply with the applicable mitigation measures pertaining to noise included in the Bayside Newark TOD Specific Plan EIR. These measures would be included as Project Design Features (City of Newark 2011).

Mitigation Measure 4.10-1a from the Bayside Newark TOD Specific Plan EIR stipulates for projects to require construction contractors to implement a site-specific noise reduction program, subject to City review and approval. The program includes the following measures that would be required throughout demolition, grading, and/or construction:

- Restrict noise-generating activities at the construction site or in areas adjacent to the construction site to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, and between 8:00 a.m. to 5:00 p.m. on Saturdays.

- Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds, wherever feasible).

- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electronically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.

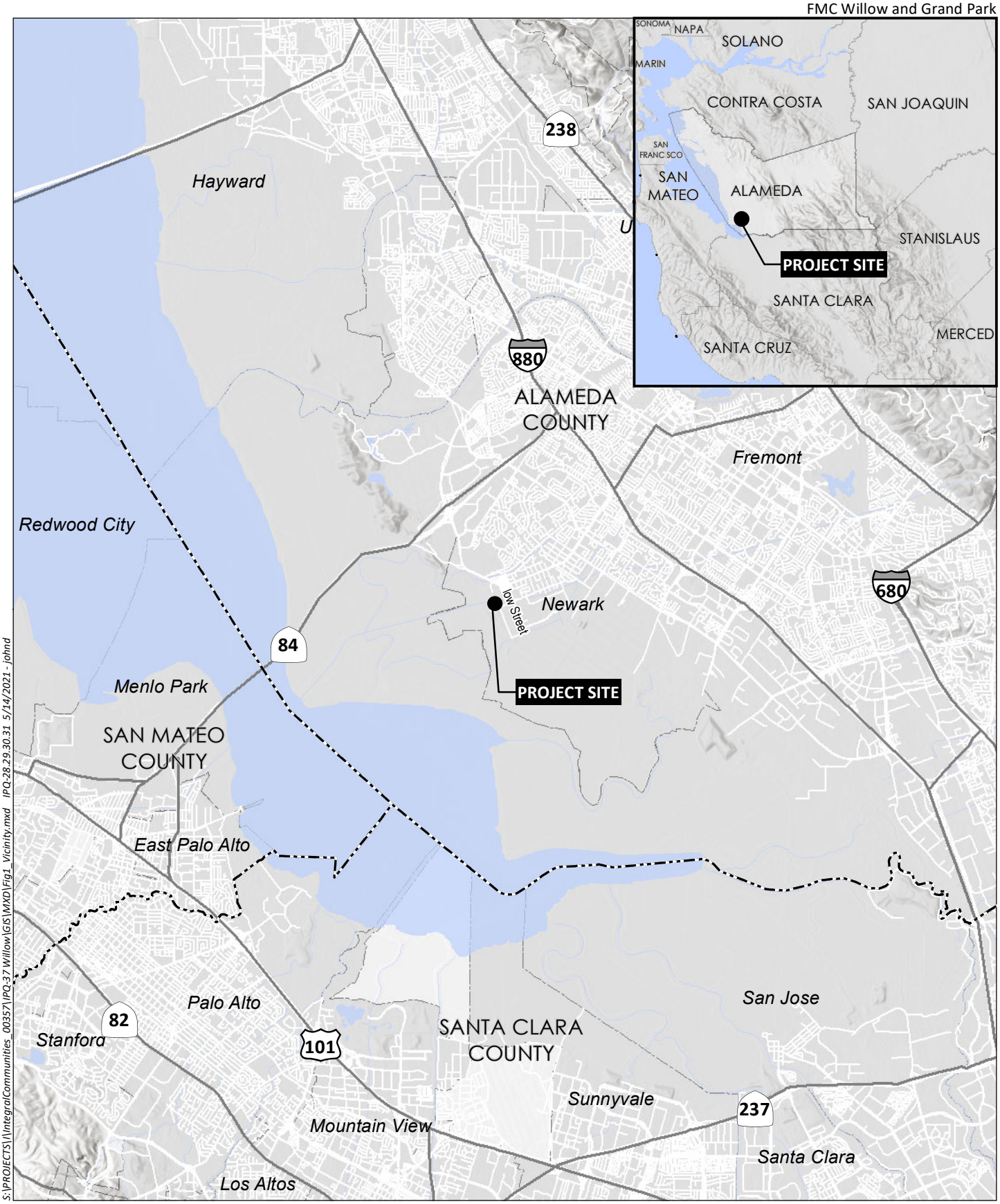
- Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporated insulation barriers, or other measures to the extent feasible.

- If feasible, the noisiest phases of construction shall be limited to less than 10 days at a time.

Mitigation Measure 4.10-1b from the Bayside Newark TOD Specific Plan EIR requires project applicants to implement a list of measures to respond to and track complaints pertaining to construction noise, ongoing throughout demolition, grading, and/or construction. These measures include the following:

- A procedure and phone numbers for notifying the City Building Inspection Division staff and Newark Police Department (during regular construction hours and off-hours);

- A sign posted on site pertaining to the permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours);

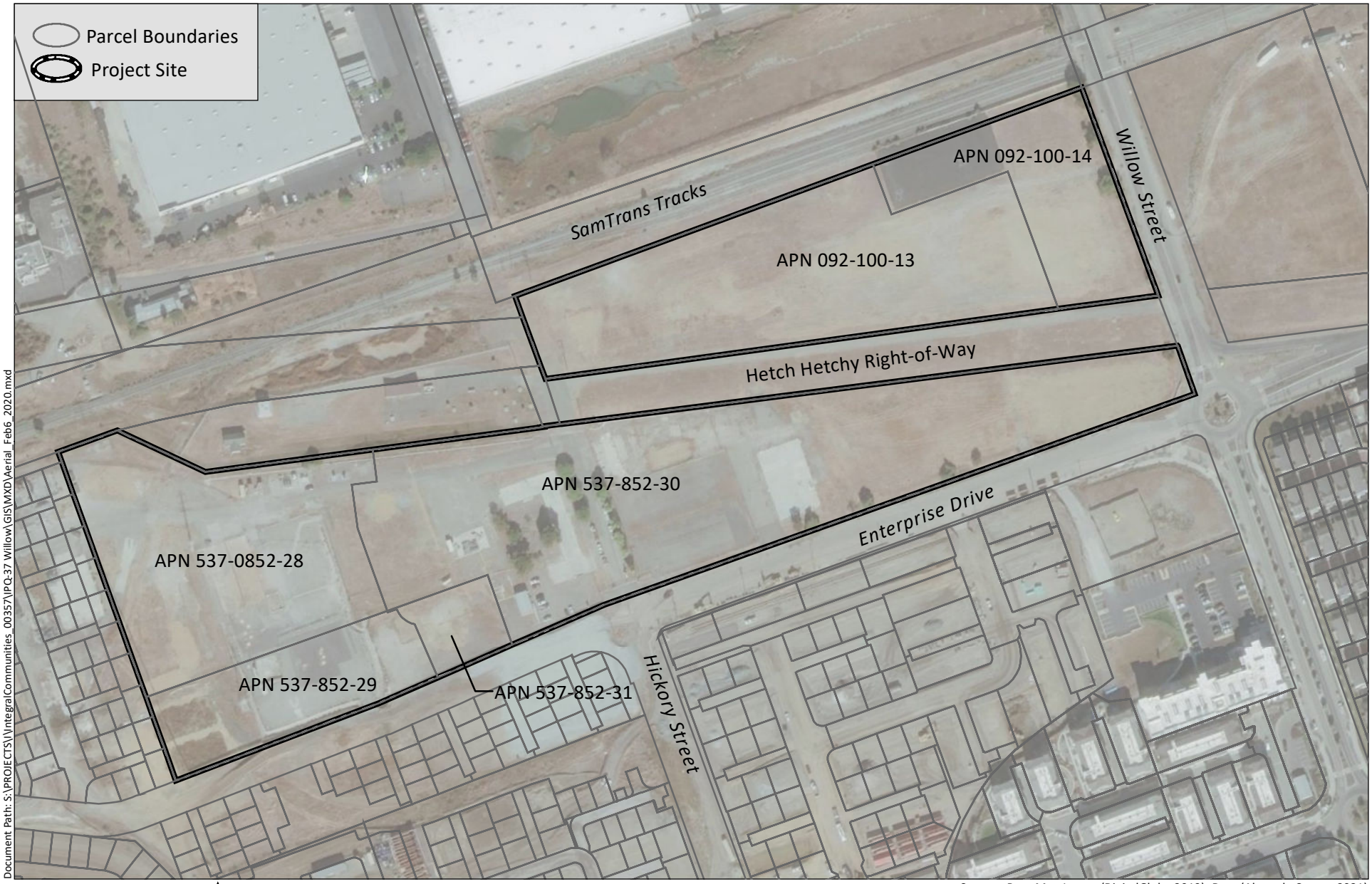


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HELIX Environmental Planning

Vicinity Map

Figure 1



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Source: Base Map Layers (DigitalGlobe 2019); Data (Alameda County 2021)

HELIX Environmental Planning

Aerial Map

Figure 2



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Source: Urban Arena 2022

HELIX Environmental Planning

Site Design

Figure 3

- The designation of an on-site construction complaint and enforcement manager for the project. The manager shall act as a liaison between the project and its neighbors (including on-site residents). The manager's responsibilities and authority shall include the following:
  - An active role in monitoring project compliance with respect to noise;
  - Ability to reschedule noisy construction activities to reduce effects on surrounding noise sensitive receivers;
  - Site supervision of all potential sources of noise (e.g., material delivery, shouting, debris box pick-up and delivery) for all trades; and
  - Intervening or discussing mitigation options with contractors.
- Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of construction activities regarding the details and estimated duration of the activity; and
- A preconstruction meeting shall be held with the job inspectors and the general contractor/on-site project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

PEIR Mitigation Measure 4.10-2 includes measures to be implemented if pile driving is required:

- Wherever possible, sonic or vibratory pole drivers shall be used instead of impact pile drivers (sonic pile drivers are only effective in certain soils).
- Engine and pneumatic exhaust controls on pile drivers shall be required as necessary to ensure that exhaust noise from pile driver engines are minimized to the extent feasible.
- Where feasible, pile holes will be pre-drilled to reduced potential noise and vibration impacts.
- Occupied residences within 300 feet of pile driving activities shall be notified of pile-driving activities at least two weeks prior to the commencement of pile driving.
- Should pile driving activities take place within 25 feet of an occupied structure, a site-specific vibration impact analysis shall be conducted to ensure vibration levels do not exceed 0.2 inches per second PPV.

In addition to these measures, the project would implement the following into the project design:

- In accordance with City Ordinance 17.24.100.B.2, for residences located within 25 feet of ground mounted HVAC equipment, attenuation of HVAC noise to levels to result in interior noises of habitable spaces levels no more than 45 dBA L_{DN} will be ensured prior to issuance of certificates of occupancy. For single-family attached or multi-family development, potential noise control measures to achieve the performance standard for indoor habitable space include but are not limited to increasing the sound transmission class rating for building exterior wall, window, and doors; and/or installing noise control barriers around the HVAC units.

1.5 CONSTRUCTION ACTIVITIES AND PHASING

The project would be constructed in two phases. Phase 1 would consist of the construction of PA1, PA2, PA3, 66 DU in PA4, and the community building (4,000 SF of retail, 344 residential DU, and 1,485 SF community building). Construction of Phase 1 would commence in April 2022 and be completed in approximately 30 months (September 2024). Phase 2 would consist of the remaining 26 DU in PA4 and the Grand Park. Construction of Phase 2 would commence with grading as early as August 2022 and is anticipated to be complete by December 2024 but could be completed as early as October 2024 (27 months). Phase 2 construction activities would overlap the Phase 1 construction activities. Approximately 12,680 tons of old asphalt and concrete (338,000 SF) would be exported during site preparation and approximately 77,700 cubic yards of soil would be imported during grading (total grading approximately 22,100 cubic yards of cut and 99,800 cubic yards of fill) to raise the building pad elevations.

2.0 ENVIRONMENTAL SETTING

2.1 NOISE AND SOUND LEVEL DESCRIPTORS AND TERMINOLOGY

All noise level or sound level values presented herein are expressed in terms of decibels (dB), with A-weighting (dBA) to approximate the hearing sensitivity of humans. Time-averaged noise levels are expressed by the symbol L_{EQ}, with a specified duration. The Community Noise Equivalent Level (CNEL) is a 24-hour average, where noise levels during the evening hours of 7:00 p.m. to 10:00 p.m. have an added 5 dBA weighting, and sound levels during the nighttime hours of 10:00 p.m. to 7:00 a.m. have an added 10 dBA weighting. This is similar to the Day Night sound level (L_{DN}), which is a 24-hour average with an added 10 dBA weighting on the same nighttime hours but no added weighting on the evening hours. Sound levels expressed in CNEL are always based on dBA. These metrics are used to express noise levels for both measurement and municipal regulations, as well as for land use guidelines and enforcement of noise ordinances.

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a hearing organ, such as a human ear. Noise is defined as loud, unexpected, or annoying sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors affecting the propagation path to the receiver contribute to the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz (kHz), or thousands of hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

The amplitude of pressure waves generated by a sound source determines the loudness of that source. A logarithmic scale is used to describe sound pressure level (SPL) in terms of dBA units. The threshold of hearing for the human ear is about 0 dBA, which corresponds to 20 micro Pascals (mPa).

Because decibels are logarithmic units, SPL cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3 dBA increase. In other words, when two identical sources are each producing sound of the same loudness, the resulting sound level at a given distance would be 3 dBA higher than one source under the same conditions.

2.2 NOISE AND VIBRATION SENSITIVE LAND USES

Noise-sensitive land uses (NSLUs) are land uses that may be subject to stress and/or interference from excessive noise, such as residential dwellings, schools, transient lodging (hotels), hospitals, educational facilities, and libraries. Industrial and commercial land uses are generally not considered sensitive to noise. As shown on Figure 2, the closest NSLUs in the project vicinity are single-family homes approximately 190 feet southeast, across Willow Street. In addition, a residential development, under construction at the time of this analysis, is located approximately 100 feet south of the project site, across Enterprise Drive, and a future residential development would be located west of the project site, adjacent to the Grand Park. The closest school to the project site is the August Schilling Elementary School, approximately 1,450 feet northeast.

Land uses in which ground-borne vibration could potentially interfere with operations or equipment, such as research, manufacturing, hospitals, and university research operations (California Department of Transportation [Caltrans] 2013a) are considered "vibration-sensitive." The degree of sensitivity depends on the specific equipment that would be affected by the ground-borne vibration. In addition, excessive levels of ground-borne vibration of either a regular or an intermittent nature can result in annoyance to residential uses or schools. The closest land uses in the project area that are subject to annoyance from vibration would be the single-family residences to the south and southeast.

2.3 REGULATORY FRAMEWORK

2.3.1 City of Newark General Plan

The City General Plan Noise Element identifies noise and land use compatibility standards for various land uses. These standards are intended to provide compatible land uses throughout the community as related to environmental noise. Low density single-family residential land uses are considered "normally acceptable" in exterior noise environments of 60 dBA L_{DN} or less and multi-family residential land uses are considered "normally acceptable" in exterior noise environments of 65 dBA L_{DN} or less (City 2013). The Noise Element identifies interior noise standards of 45 dBA L_{DN} or less for all residential land uses.

The following goals and implementation policies from the Noise Element are relevant to the proposed Project:

> *Policy NO 1.2.1: The City shall require that all new developments incorporate design elements to minimize adverse noise impacts on surrounding land uses.*
>
> > *Program NO 1.2.1a: Establish design and planning requirements that lessen the impact of noise such as setbacks, earthen berms, building orientation, and landscaping.*

Program NO 1.2.1b: Require multi-family residences and hotels comply with the California Noise Insulation Standards, in the California Administrative Code, Title 25, Chapter 1, Subchapter 1, when they fall within the 60 dB (CNEL or L_{DN}) noise exposure contours.

Program NO 1.2.1c: Establish planning requirements for designers and architects on placement of windows, doors, and bedrooms relative to noise sources.

Policy NO 1.3.4: Control noise that causes discomfort between neighbors.

Program NO 1.3.4c: No person shall be allowed to cause any noise to be emitted past his/her property line in any manner so as to create any noise that would cause the ambient noise level to be increased by more than 6 dB.

2.3.2 City of Newark Municipal Code

The City Municipal Code prohibits or limits the level of noise produced on private or public land and requires an analysis of future noise levels for projects which would site a noise sensitive land use. The following sections would be applicable to the project:

Section 17.24.100 – Noise

A. Noise Limits. It shall be unlawful for any person to disturb the peace, quiet, and comfort of the community, or any portion thereof, or neighborhood therein, by creating or causing to be created any unreasonable noises.

2. Noise Restriction by Decibel.

a. Residential Property Noise Limits.

i. No person shall produce or allow to be produced by human voice, machine, device, or any combination of same, on residential property, a noise level at any point outside of the property plane that exceeds 70 dBA between the hours of 7:00 a.m. and 9:00 p.m. or 60 dBA between the hours of 9:00 p.m. and 7:00 a.m.

ii. No person shall produce or allow to be produced by human voice, machine, device, or any combinations of same, on multifamily residential property, a noise level more than 60 dBA three feet from any wall, floor, or ceiling inside any dwelling unit on the same property, when the windows and doors of the dwelling unit are closed, except within the dwelling unit in which the noise source or sources may be located.

b. Commercial and Industrial Property Noise Limits. Except for commercial and industrial property abutting residential property, no person shall produce or allow to be produced by human voice, machine, device, or any other combination of same, on commercial or industrial property, a noise level at any point outside of the property plane that exceeds 70 dBA.

i. Abutting Residential Property. Commercial and industrial property that abuts residential property shall be subject to the residential property noise limits set forth in subsections (a)(i) and (ii) above.

c. Public Property Noise Limits. Except as otherwise provided in these regulations, no person shall produce or allow to be produced on public property, by human voice, machine, device, or any combination of same, a noise level that exceeds 60 dBA at a distance of 25 feet or more from the source. Noise from activities of the City of Newark is exempted from these regulations.

3. Construction and Landscaping Activities. Unless otherwise provided pursuant to a duly-issued permit or a condition of approval of a land use entitlement, the construction, alteration, or repair of structures and any landscaping activities, occurring between the hours of 10:00 a.m. and 6:00 p.m. on Sundays and holidays, and 7:00 a.m. and 7:00 p.m. on other days, shall be subject to the following:

a. No individual device or piece of equipment shall produce a noise level exceeding 83 dBA at a distance of twenty-five feet from the source. If the device or equipment is housed within a structure on the property, the measurement shall be made outside the structure at a distance as close as possible to twenty-five feet from the equipment.

b. The noise level at any point outside of the property plane shall not exceed 86 dBA. During all other times, the decibel levels set forth in Subsection 17.24.100.A.2, Noise Restriction by Decibel, control.

B. Noise Creation and Noise Exposure.

1. Acoustic Study. An acoustic study shall be required for any proposed project which could create or be subject to a noise exposure greater than that deemed "normally acceptable" by the general plan.

2. Noise Attenuation Measures. Any project subject to the acoustic study requirements of Subsection 17.24.100.B.1, Acoustic Study, may be required as a condition of approval to incorporate noise attenuation measures deemed necessary to ensure that noise standards are not exceeded.

a. New noise-sensitive uses (e.g., schools, hospitals, churches, and residences) shall incorporate noise attenuation measures to achieve and maintain an interior noise level of 45 dBA.

b. Noise attenuation measures identified in an acoustic study shall be incorporated into the project to reduce noise impacts to satisfactory levels.

c. Emphasis shall be placed upon site planning and project design measures. The use of noise barriers shall be considered and may be required only after all feasible design-related noise measures have been incorporated into the project.

The following municipal code section would be applicable to vibration generated by the project, or affecting the project:

> *17.24.120 - Vibration.*
>
> *No vibration shall be produced that is transmitted through the ground and is discernible without the aid of instruments by a reasonable person at the lot lines of the site. Vibrations from temporary construction, demolition, and vehicles that enter and leave the subject parcel (e.g., construction equipment, trains, trucks, etc.) are exempt from this standard.*
>
> *A. Development Near Railroads. An acoustic study shall be required for any proposed development within two hundred feet of a railroad track. Measures may be required to ensure that vibration impacts remain below acceptable levels.*

2.4 EXISTING CONDITIONS

The project site is currently vacant, contains no structures, and is largely covered grass and ruderal vegetation. There are no existing structures on the project site. A 110-foot right-of-way for water pipes owned by the San Francisco Public Utilities Commission bisects the project site from east to west. The project site is bordered by Enterprise Drive to the south, Willow Street to the east, and a 100-foot-wide right-of-way for the Dumbarton Rail Corridor (owned by San Mateo County Transit District [Samtrans]) to the north. The Dumbarton Rail Corridor does not currently carry any rail traffic. Surrounding land uses include a residential development project under construction at the time of this analysis across Enterprise Drive to the south, a single-family residential neighborhood across Willow Street to the southeast, industrial/warehouse buildings across the train tracks to the north, and vacant land to the west and across Willow Street to the east.

2.4.1 Existing Noise Conditions

2.4.1.1 Existing Noise Sources

The predominant existing noise sources in the vicinity of the project site are vehicular traffic on Willow Street and Enterprise Drive, and overflights of commercial aircraft. Although there are old train tracks within the right-of-way on the north side of the project, the Dumbarton Rail Corridor is not currently active and has no train traffic.

2.4.1.2 General Site Survey

Three short-term ambient noise measurements (M1, M2, and M3) were conducted during a site visit on December 4, 2018, as shown on Figure 2. Site M1 was located in the southwestern portion of the site, approximately 200 feet north of Enterprise Drive and 700 feet west of Willow Street. Site M2 was located in the northeaster portion of the site, approximately 500 feet north of Enterprise Drive and 450 feet west of Willow Street. Because of road construction on Willow Street adjacent to the project site, a representative traffic noise measurement was taken at site M3 on Willow Street between Seawind Way and Bayshore Avenue, approximately 1,100 feet (0.2 mile) southeast of the project site. All measurements were taken with the noise meter mounted on a tripod 5 feet above the ground.

Sources of noise noted during measurement M1 and M2 included construction activity on Willow Street and Enterprise Drive, and commercial aircraft overflying the site. Sources of noise noted during measurement M3 included traffic on Willow Street and commercial aircraft overflying the site. Traffic was counted on Willow Street during measurement M3 and included: 62 cars and light trucks; 3 medium trucks; and 5 heavy trucks.

The measured noise levels and related weather conditions for the short-term measurements are shown in Table 1, *Short-term Noise Measurement Results*. Locations of each measurement site are shown on Figure 4, *Modeled Receiver Locations*. See Appendix A, *Noise Measurements Sheets*, for survey notes from the short-term measurements.

Table 1
SHORT-TERM NOISE MEASUREMENT RESULTS

Measurement	Location	Conditions	Time	dBA L_{EQ}	Notes
M1	Southwest portion of project site, 200 feet north of Enterprise Dr. and 700 feet west of Willow St.	63°F, 11 mph wind, 58 percent humidity, mostly sunny	10:33 a.m. to 10:43 a.m.	56.7	Construction activity on Enterprise Dr. and Willow St including backup alarms. Commercial aircraft every 2 to 4 minutes.
M2	Southwest portion of project site, 500 feet north of Enterprise Dr. and 450 feet west of Willow St.	65°F, 11 mph wind, 52 percent humidity, mostly sunny	10:47 a.m. to 10:57 a.m.	52.4	Construction activity on Enterprise Dr. and Willow St including backup alarms. Commercial aircraft every 2 to 4 minutes.
M3	Sidewalk south of Willow street, between Seawind Way and Bayshore Ave.	65°F, 10 mph wind, 51 percent humidity, mostly sunny	11:11 a.m. to 11:26 a.m.	54.9	Apartments/ Condos both sides of Willow St. 5 feet high retraining wall both sides of street. 60 cars, 3 medium trucks, 5 heavy trucks.

Site measurements were taken on December 4, 2018.

3.0 METHODOLOGY, ASSUMPTIONS, AND THRESHOLDS

3.1 EQUIPMENT AND METHODOLOGY

3.1.1 Ambient Noise Survey

The following equipment was used to measure existing noise levels at the project site:

- Larson Davis SoundTrack LxT Sound Level Meter
- Larson Davis Model CAL250 Calibrator
- Microphone windscreen
- Tripod for the sound level meter

The sound-level meters were field-calibrated immediately prior to the noise measurement to ensure accuracy. All measurements were made with meters that conform to the American National Standards Institute (ANSI) specifications for sound level meters (ANSI SI.4-1983 R2006). All instruments were maintained with National Institute of Standards and Technology traceable calibration per the manufacturers' standards.

3.1.2 Noise Modeling Software

Modeling of the exterior noise environment for this report was accomplished using a computer noise model: Computer Aided Noise Abatement (CadnaA) version 2021. CadnaA is a model-based computer program developed by *DataKustik* for predicting noise impacts in a wide variety of conditions. CadnaA assists in the calculation, presentation, assessment, and mitigation of noise exposure. It allows for the input of project-related information, such as noise source data, barriers, structures, and topography to create a detailed CadnaA model, and uses the most up-to-date calculation standards to predict outdoor noise impacts.

The traffic noise was modeled using the Traffic Noise Model (TNM) version 2.5. The TNM was released in February 2004 by the U.S. Department of Transportation (USDOT) and calculates the daytime average hourly L_{EQ} from three-dimensional model inputs and traffic data (USDOT 2004). The one-hour L_{EQ} noise level is calculated utilizing peak-hour traffic. The one-hour L_{EQ} noise level is calculated utilizing peak-hour traffic calculations provided in the project-specific trip generation analysis (Fehr & Peers 2021). The one-hour L_{EQ} noise level output calculated by the model is equivalent to the L_{DN} (Caltrans 2013b).

Potential future rail noise in the project vicinity was analyzed using the Federal Transit Administration (FTA) Noise Impact Assessment Model, version 1/29/2019 (2019). The spreadsheet enables users to predict noise from combinations of locomotives, rail cars, and at-grade tracks crossing roads.



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Source: Urban Arena 2021

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Modeled Receiver Locations

Figure 4

3.2 ASSUMPTIONS

3.2.1 Construction

Construction activities would include pavement demolition, grading (including clearing and grubbing), underground utilities, paving, building construction and architectural coatings (e.g., painting). Construction activities would use a variety of construction equipment, including graders, rubber-tired dozers, loaders/backhoes, excavators, cranes, forklifts, water trucks, vibratory rollers, and pavers. The most intensive construction noise would be during the site demolition, grading, and underground utilities activities, which could involve the simultaneous uses of multiple pieces of heavy equipment. Approximately 12,680 tons of old asphalt and concrete would be exported during site preparation and approximately 77,700 cubic yards of soil would be imported during grading to raise the building pad elevations. Approximately 1,254 one-way haul truck trips would be required during demolition and 9,713 one-way haul truck trips during grading.

3.2.2 Operation

The potential operational noise sources on the project site include heating, ventilation, and air conditioning (HVAC) systems for the homes and commercial space, and parking lots for the commercial space and transit station. In addition, the project would generate vehicular traffic that would add to noise levels on nearby roadways.

3.2.2.1 Off-Site Traffic Noise

Off-site traffic noise modeling is based on data in the project trip generation and intersection analysis memorandum (Fehr & Peers 2021). Data from the traffic analysis includes traffic estimates for surrounding street segments for the existing (year 2011) and cumulative (year 2035) conditions with and without the project. Table 2*, Project Traffic Volumes* displays the traffic volumes on surrounding streets. Anticipated future traffic noise levels are based on the forecasted traffic volumes. Traffic was modeled using the posted speed limit for the residential areas of all roadway segments analyzed. A typical vehicle mix of 96 percent cars and light trucks, 3 percent medium trucks, and 1 percent heavy trucks was used for modeling existing and future noise conditions in the vicinity of the project for all segments.

Table 2
PROJECT TRAFFIC VOLUMES

Roadway Segment	Speed Limit (mph)	PM Peak Traffic Existing (2011)	PM Peak Traffic Existing + Project	PM Peak Traffic Cumulative (2035)	PM Peak Traffic Cumulative + Project
Thornton Ave.					
Gateway Blvd. to Willow St.	45	940	986	2,132	2,178
Willow St. to Spruce St.	35	839	910	2,155	2,226
Spruce St. to Cherry St.	35	1,063	1,129	2,327	2,393
Cherry St. to Newark Blvd.	35	1,367	1,431	1,953	2,017
Newark Blvd. to Cedar Blvd.	35	1,589	1,647	2,327	2,385
Newark Blvd.					
Cedar St. to Thornton Ave.	35	1,616	1,623	3,292	3,299

Roadway Segment	Speed Limit (mph)	PM Peak Traffic Existing (2011)	PM Peak Traffic Existing + Project	PM Peak Traffic Cumulative (2035)	PM Peak Traffic Cumulative + Project
Cedar Street					
Lake Blvd. to Thornton Ave.	35	1,220	1,221	2,160	2,161
Thornton Ave. to Central Ave.	35	1,097	1,098	1,826	1,827
Cherry St.					
Thornton Ave. to Central Ave.	35	910	912	1,784	1,786
Central Ave. to Mowry Ave.	35	1,536	1,555	2,940	2,959
Willow St.					
Thornton Ave. to Enterprise Dr.	35	519	640	1,439	1,560
Central Ave.					
Cherry St. to Cedar St.	35	909	910	1,614	1.,615
Mowry Ave.					
Cherry Street to I-880	35	2,137	2,184	3,717	3,746
Enterprise Dr.					
Willow St. to Hickory St.	35[1]	0	57	443	500

Source: Fehr & Peers 2021

ADT = average daily trips; Ave. = Avenue; Blvd. = Boulevard; Dr. = Drive; I-880 = Interstate 880; St. = Street

Notes:

[1] There is no posted speed limit on Enterprise Drive between Willow Street and Hickory Street. Modeling assumes the speed limit on Enterprise Drive east of Willow Street of 35 mph would apply.

3.2.3 Train Noise and Vibration

The right-of way and train tracks along the north side of the project site are owned by the SamTrans and are part of the proposed Dumbarton Rail Corridor passenger rail line which would provide service across San Francisco Bay between the communities of Menlo Park and Redwood City to the west and Union City and Newark to the east. The Dumbarton Rail Corridor was acquired by the SamTrans in 1988 and several plans for the restoration of the tracks and bridges have been proposed. No plans, schedules, or funding for implementation of rail service in the Dumbarton Rail Corridor have been approved. The PEIR assumed six commuter rail trains per day would eventually use the corridor and stop at the transit station platform. Since the PEIR was adopted, the Dumbarton Transportation Corridor Study (DTCS) was released in August 2017. This study analyzed ten transportation alternatives ranging from improvements to existing highways and highway bridges, to new tracks and rail bridges that would connect to the Caltrain commuter rail system in Redwood City and continue to San Francisco (SamTrans 2017). Environmental review of the DTCS is in progress at the time of this analysis and no preferred alternative from the DTCS has been publicly identified.

Noise and vibration impacts from trains on residents sited by the project were analyzed for two scenarios. Scenario 1 is the six trains per day assumed in the PEIR, assuming diesel locomotives pulling passenger cars similar to existing trains in use by Caltrain. Scenario 2 is the maximum anticipated rail traffic scenario in the DTCS, which would use diesel or electric multiple-unit trains (self-propelled trains, no locomotives). The maximum daily ridership predicted in the DTCS is 15,300 (SamTrans 2017). Assuming three-car diesel multiple-unit (DMU) trains similar to those in service for Sonoma-Marin Area Rail Transit, 25 daily trains would be required to carry the maximum anticipated daily ridership. The earliest anticipated train service in the DTCS would start in 2028.

3.2.4 Bus Noise

A future bus stop would be located in the Transit Station, located 80 feet east of the closest PA2 townhomes(see Figure 3). The details of future bus service were not known at the time of this analysis. Future bus service would be provided by Alameda County Transit District (AC Transit) and would likely comprise the closest two existing bus routes (lines 200 and 251) which provide a combined 48 buses per day and up to 3 buses per hour (AC Transit 2020). Noise impacts on project residences near the Transit Station were analyzed assuming 3 peak hour buses. Traffic within the Transit Station was modeled at 15 mph.

3.3 SIGNIFICANCE CRITERIA

The impact analysis provided below is based on the application of the following thresholds of significance consistent with the PEIR. The project would have a significant impact if it would result in any of the following:

1. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

2. Expose persons to or generate excessive ground borne vibration or ground borne noise levels;

3. Substantially permanently increase ambient noise levels in the project vicinity above levels existing without the project;

4. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;

5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project site to excessive noise levels; and

6. For a project within the vicinity of a private airstrip, expose people residing or working in the project site to excessive noise levels.

The significance of noise and vibration levels, or the increase in noise levels as a result of the project, are based on the following standards from the City General Plan or other agencies, consistent with the standards used to determine significance in the PEIR:

- **Temporary Construction Noise**: Construction activities which are not authorized by the City through a permit or condition of approval would be subject to the City Municipal Code Section 17.24.100.A.3 which limits the level of allowable construction noise.

- **Permanent Operational Noise**:

    - Traffic Noise sources: A substantial direct or cumulative permanent increase in traffic noise could occur if the resulting noise level exceeds the normally acceptable exterior level specified in the City General Plan for the land use affected (60 dBA L_{DN} for single-family

residences and 65 dBA L_{DN} for multi-family residences), and the resulting noise level increase exceeds any of the following criteria:

- An increase of the existing ambient noise levels by 5 dB or more, where the existing ambient level is less than 60 dBA L_{DN};
- An increase of the existing ambient noise level by 3 dB or more, where the existing ambient level is 60 to 65 dBA L_{DN};
- An increase of the existing ambient noise level by 1.5 dB or more, where the existing ambient level is greater than 65 dBA L_{DN}; or
- a significant portion of the noise increase would be the result of the project, and the "cumulative plus project" condition results in a 1 dBA increase in noise over the "cumulative no project" condition.

  - Non-Transportation Noise Sources:) The City Municipal Code Section 17.24.100.2.a establishes noise limits for residential property, or commercial property which abuts residential property. Noise levels measured at any point outside of the property plane that exceed 70 dBA between the hours of 7:00 a.m. and 9:00 p.m. or 60 dBA between the hours of 9:00 p.m. and 7:00 a.m. would be significant.

- **Construction Groundborne Vibration**: The FTA has guidelines and recommendations to limit ground-borne vibration based on the age and/or construction type of the structures near construction activity. Per the FTA, a ground-borne vibration level of 0.2 inch-per-second peak particle velocity (PPV) would be considered the damage threshold criterion for non-engineered timber and masonry buildings (FTA 2018). This analysis assumes a conservative threshold of 0.2-inch-per-second.

- **Rail Groundborne Vibration**: Based on FTA vibration impact criteria, 80 vibration velocity decibels (VdB) is the applicable maximum acceptable vibration level for residential uses adjacent to a rail corridor with less than 30 vibration events per day passing by the project site (FTA 2018).

4.0 IMPACTS

Noise and vibrations are discussed in Chapter 4.10 of the PEIR prepared for the Bayside Newark TOD Specific Plan (City 2011).

4.1 PEIR IMPACT 4.10-1

Construction related activities could result in temporary noise impacts to nearby noise sensitive receivers (thresholds of significance 1 and 4).

4.1.1 Short-Term Construction Noise Impact Conclusions in the PEIR

The PEIR concluded that temporary construction noise impacts to NSLUs in the Specific Plan vicinity and to future residents of the Specific Plan sited prior to full buildout of the Specific Plan would be potentially significant. PEIR Mitigation Measures 4.10-1a and 4.10-1b would limit the hours of

construction activity and require project applicants to implement a site-specific constructions noise reduction program, and measures to track and respond to noise complaints. Implementation of Mitigation Measures 4.10-1a and 4.10-1b would reduce the impacts to less than significant.

4.1.2 Project Specific Short-Term Construction Noise Impact Analysis

Construction activities would result in noise from the use of heavy construction equipment on the project site, from heavy trucks hauling debris from the site and hauling soil and building materials to the site, and from worker and vendor vehicles traveling to and from the site. The equipment to be used in construction of the project has not been determined, but could include backhoes, bulldozers, front loaders, scrapers, graders, compacting equipment, concrete saws, and jackhammers. The loudest equipment anticipated to be used would be a backhoe mounted jackhammer used to breakup old asphalt or concrete. Noise levels from a typical backhoe mounted jackhammer would measure 83 dBA L_{EQ} at 50 feet (FTA 2018). As discussed above, the nearest NSLU are residences approximately 100 feet south of the project site. A backhoe mounted jackhammer would be attenuated to approximately 77 dBA L_{EQ} at 100 feet.

The City Municipal Code Section 17.24.100.3 limits the allowable noise for any individual piece of construction equipment to 83 dBA measured at 25 feet, during the hours between 7:00 a.m. and 7:00 p.m. Monday through Saturday, and 10:00 a.m. to 6:00 p.m. on Sundays and holidays. The ordinance exempts construction noise from activities authorized by a duly issued permit or a condition of approval of a land use entitlement. The project would be required to obtain construction permits (e.g., grading, building), or a condition of approval, which specify that the project's daytime temporary construction noise would be exempt from the noise ordinance limits, since the project was included as part of the approvals and MMRP requirements in the PEIR. Implementation of Mitigation Measure 4.10-1a from the PEIR would limit the construction activity to the hours between 9:00 a.m. to 7:00 p.m., Monday through Friday, and between 8:00 a.m. to 5:00 p.m. on Saturdays. In addition, Mitigation Measures 4.10-1a and 4.10-1b contain best management practices to reduce, track, and address construction noise. Therefore, the construction of the project would not result in a temporary increase in ambient noise levels. The impact would be less than significant with mitigation incorporated and would not exceed the severity of the impact conclusions in the PEIR.

4.1.2.1 Mitigation Measures

PEIR Mitigation Measure 4.10-1a

To reduce noise impacts due to construction, project applicants shall require construction contractors to implement a site-specific noise reduction program, subject to City review and approval, which includes the following measures, ongoing through demolition, grading, and/or construction:

- Restrict noise-generating activities at the construction site or in areas adjacent to the construction site to the hours of 7:00 a.m. to 7:00 p.m., Monday through Friday, and between 8:00 a.m. to 5:00 p.m. on Saturdays.

- Equipment and trucks used for project construction shall utilize the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers,

ducts, engine enclosures, and acoustically attenuating shields or shrouds, wherever feasible).

- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for project construction shall be hydraulically or electronically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. However, where use of pneumatic tools is unavoidable, an exhaust muffler shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible, and this could achieve a reduction of 5 dBA. Quieter procedures shall be used, such as drills rather than impact equipment, whenever feasible.

- Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporated insulation barriers, or other measures to the extent feasible.

- If feasible, the noisiest phases of construction shall be limited to less than 10 days at a time.

PEIR Mitigation Measure 4.10-1b

Prior to the issuance of each grading permit, project applicants shall submit to the City Building Inspection Division a list of measures to respond to and track complaints pertaining to construction noise, ongoing throughout demolition, grading, and/or construction. These measures shall include the following:

- A procedure and phone numbers for notifying the City Building Inspection Division staff and Newark Police Department (during regular construction hours and off-hours);

- A sign posted onsite pertaining the permitted construction days and hours and complaint procedures and who to notify in the event of a problem. The sign shall also include a listing of both the City and construction contractor's telephone numbers (during regular construction hours and off-hours);

- The designation of an onsite construction complaint and enforcement manager for the project. The manager shall act as a liaison between the project and its neighbors (including onsite residents). The manager's responsibilities and authority shall include the following:

    - An active role in monitoring project compliance with respect to noise;
    - Ability to reschedule noisy construction activities to reduce effects on surrounding noise sensitive receivers;
    - Site supervision of all potential sources of noise (e.g., material delivery, shouting, debris box pick-up and delivery) for all trades; and
    - Intervening or discussing mitigation options with contractors.

- Notification of neighbors and occupants within 300 feet of the project construction area at least 30 days in advance of construction activities regarding the details and estimated duration of the activity; and

- A preconstruction meeting shall be held with the job inspectors and the general contractor/onsite project manager to confirm that noise measures and practices (including construction hours, neighborhood notification, posted signs, etc.) are completed.

4.2 PEIR IMPACT 4.10-2

Development associated with implementation of the proposed project could result in temporary vibration impacts to nearby noise sensitive receptors during grading and construction activities (threshold of significance 2).

4.2.1 Vibration Impact Conclusions in the PEIR

The PEIR concluded that construction activities associated with implementation of the Specific Plan could require the use of impact pile drivers and the vibration impacts would be potentially significant. PEIR Mitigation Measure 4.10-2 would require alternatives to impact pile drivers be used where feasible, or a project specific vibration analysis if pile driving activities would occur with 25 feet of an occupied structure. PEIR Mitigation Measure 4.10-2 would reduce impacts to less than significant.

4.2.2 Project Specific Vibration Impact Analysis

4.2.2.1 Construction Vibration

The project's building foundation design and installation method has not been determined at the time of this analysis. Based on the size and height of the proposed project PA1 six-story building and four-story townhomes along Enterprise Drive and the soil typical of the project site, the building foundations may require support by deep piles. Impact driven piles could result in vibrations as high as 1.52 inches per second PPV at a distance of 25 feet (Caltrans 2013a). The closest vibration sensitive land use to potential pile driving activity would be approximately 180 feet across Enterprise drive to the south. A 1.52 inches per second PPV vibration level would equal approximately 0.17 inches per second PPV at a distance of 160 feet.[1] This would be lower than the 0.2-inches per second PPV FTA threshold for non-engineered wood and masonry structures. In addition, PEIR Mitigation Measure 4.10-2 requires alternatives to impact pile drivers to be used wherever possible, notification of all occupied residences within 300 feet of pile driving activities, and a site-specific vibration analysis if pile driving would be required with 25 feet of an occupied structure.

Another potential source of vibration during project construction activities would be a vibratory roller, which may be used within 100 feet of the nearest off-site residences to the south. A vibratory roller could create vibrations as high as 0.210 inches per second PPV at a distance of 25 feet (Caltrans 2013a). A 0.210 inches per second PPV vibration level would equal approximately 0.046 inches per second PPV

[1] Equipment PPV = Reference PPV * $(25/D)^n$ (in/sec), where Reference PPV is PPV at 25 feet, D is distance from equipment to the receiver in feet, and n = 1.1 (the value related to the attenuation rate through typical soil); formula from Caltrans 2013a.

at a distance of 100 feet.[1] This would be lower than the 0.2 inches per second PPV FTA threshold for non-engineered wood and masonry structures.

Therefore, although vibrations from pile driving and vibratory rollers may be perceptible to nearby receptors, with implementation of PEIR Mitigation Measure 4.10-2, temporary groundborne vibration impacts associated with project construction would be less than significant and would not exceed the severity of the impact conclusions in the PEIR.

4.2.2.2 Railroad Vibration

Potential groundborne vibration from trains was estimated following the general vibration assessment methodology in the FTA Transit Noise and Vibration Impact Assessment Manual (FTA 2018). Vibrations are calculated for a single event of a train passing by. Vibrations from trains were calculated for two possible future scenarios: Scenario 1, a diesel locomotive pulling five or six passenger cars; and Scenario 2, a DMU train with one powered passenger car pulling two unpowered passenger cars.

The closest project residential buildings to the potential future railroad tracks would be 50 feet from the center of the right-of-way. Trains were assumed to be traveling at an average of 25 mph as they slow down or speed up approaching the future platform in the Transit Station. The FTA vibration calculation method provides adjustments for project specific conditions: for a speed lower than the 50-mph standard, an adjustment of minus 6 dBA (for 25 mph); for wood framed residential buildings, an adjustment of minus 5 dBA; for resonance from the floors, wall and ceilings, an adjustment of plus 6 dBA; and for second floor living spaces, an adjustment of minus 4 dBA. The FTA methodology accounts for reduced vibrations from DMU trains by applying a minus 5 dBA adjustment. The predicted groundborne vibration level for a train pass-by event would be 78.7 VdB for a diesel locomotive commuter train (Scenario 1) and 73.7 VdB for a DMU train (Scenario 2). The full train vibration calculations are included in Appendix B, *Train Vibration Calculations*, to this report. These vibrations would be below the FTA standard of 80 VdB for rail lines with less than 30 vibration events per day. Therefore, future residents of the project would not be subject to excessive groundborne vibrations from future passenger trains.

4.2.2.3 Mitigation Measures

PEIR Mitigation Measure 4.10-2

If pile driving is required for building construction, construction contractors shall incorporate the following additional requirements:

- Wherever possible, sonic or vibratory pole drivers shall be used instead of impact pile drivers (sonic pile drivers are only effective in certain soils).
- Engine and pneumatic exhaust controls on pile drivers shall be required as necessary to ensure that exhaust noise from pile driver engines are minimized to the extent feasible.
- Where feasible, pile holes will be pre-drilled to reduced potential noise and vibration impacts.
- Occupied residences within 300 feet of pile driving activities shall be notified of pile-driving activities at least two weeks prior to the commencement of pile driving.

- Should pile driving activities take place within 25 feet of an occupied structure, a site-specific vibration impact analysis shall be conducted to ensure vibration levels do not exceed 0.2 inches per second PPV.

4.3 PEIR IMPACT 4.10-3

Implementation of the proposed project would not result in an increase in onsite ambient noise levels due to operational noise impacts (thresholds of significance 1, 3, 5 and 6).

4.3.1 Impacts from Residential Sources Conclusions in the PEIR

The PEIR concluded that noise from residential stationary sources (e.g., children playing, pets, amplified music, mechanical equipment, car repair, home repair) would primarily occur during the "daytime" activity hours. Noise impacts to surrounding uses associated with implementation of the Specific Plan would be consistent with the surrounding residential uses and impacts would be less than significant.

4.3.2 Project-Specific Residential Sources Analysis

The project residential uses would be consistent with the residential uses analyzed in the PEIR. Therefore, residential stationary noise sources, including HVAC systems (e.g., mechanical equipment) would not result in noise levels higher than that anticipated in the PEIR.

Further, the project would ensure that residential HVAC sources would not exceed 45 dBA L_{DN} for interior habitable space prior to building occupancy, as noted in Section 1.4 of this report. Therefore, the impact would be less than significant and would not exceed the severity of the impact conclusions in the PEIR.

Mitigation Measures

No mitigation would be required.

4.3.3 Impacts from Non-Residential Sources Conclusions in the PEIR

The PEIR concluded that the Specific Plan proposes the development of residential, commercial, and office uses in an area that is currently adjacent to existing commercial and residential uses. As such, the increase in ambient noise levels is anticipated to generate noise levels similar to the surrounding developments. Where new development would abut sensitive uses such as residences, the Specific Plan includes design guidelines and development standards that are aimed at reducing impacts, including building orientation, landscaped setbacks, and location of appropriate uses. By providing the necessary regulatory and design guidance, the proposed project ensures that future development of parcels within the Specific Plan area would not result in significant impacts. Any new stationary noise source would be required to provide adequate sound attenuation such that City noise standards are achieved. Compliance with the City's standards and the Specific Plan development standards would reduce potential stationary source noise impacts to less than significant levels.

4.3.4 Project-Specific Non-Residential Sources Analysis

The project's commercial/retail uses would be consistent with the non-residential uses analyzed in the PEIR. Therefore, commercial stationary noise sources, including heating, ventilation, and HVAC systems (e.g., mechanical equipment) would not result in noise levels higher than that anticipated in the PEIR.

Noise from cars and buses (three buses per hour) approaching and circulating in the bus area (the 4-lane entrance drive and within the Transit Station), and driving on Willow Street and Enterprise Drive was modeled as described in Section 3.2. Peak hourly cars utilizing the entrance drive were estimated using the trip generation data from the transportation memorandum assuming 42 percent of project trips from the residential units (157 units in PA1 and PA2 out of the 370 total project units) and all of the commercial trips would utilize the entrance drive (59 peak hour trips; Fehr & Peers 2021).

Noise levels were predicted at receiver locations in the exterior spaces of the closest project residences to the Transit Station and Willow Street: ground level patios for the PA2 townhomes and second floor residences in the PA1 mixed-use building, (see Figure 4). The predicted noise levels for the modeled receiver locations are shown in Table 3, *Predicted Car and Bus Noise for Project Residences*. As shown in Table 3, the highest predicted noise level from the cars and buses using the entrance drive and vehicles on Willow Street would be 61.1 dBA L_{DN} at location R4 and would not exceed the City normally acceptable standard of 65 dBA L_{DN}. The model output tables are included in Appendix C, *Project Residence Noise Modeling Output*, to this report. Therefore, the impact would be less than significant and would not exceed the impact severity of the conclusion in the PEIR.

Table 3
PREDICTED CAR AND BUS NOISE FOR PROJECT RESIDENCES

Reveiver ID	Location	Noise Level (dBA L_{DN})
R1	PA1 Mixed Use on Willow Street	55.2
R2	PA1 Mixed Use on Willow Street	55.8
R3	PA1 Mixed Use on Willow Street	57.8
R4	PA1 Mixed Use on Willow Street	61.1

Source: CadnaA

4.3.4.1 Mitigation Measures

No mitigation would be required.

4.3.5 Impacts from Train Noise Conclusions in the PEIR

The PEIR concluded that the impacts on project residences related to noise from future trains would be potentially significant. Mitigation Measure 4.10-3 requires a project-specific acoustical study and identification of noise reduction measures to reduce noise levels, if necessary, to reduce noise to a less than significant level.

4.3.6 Project-Specific Train Noise Analysis

The railroad tracks in the right-of-way along the project's northern boundary are not currently active, and there are no currently approved proposals to resume train traffic in the right-of-way. However, there is a potential for future passenger rail service, which could result in noise impacts on future

project residents. Potential future noise from passenger trains was modeled for two scenarios, as described in Section 3.0, above. The modeling conservatively assumes that all future train traffic would stop at the proposed platform adjacent to the Transit Station and continue east, crossing Willow Street at-grade. Trains approaching an at-grade crossing are required to sound their warning horns before reaching the crossing. In addition, the at-grade crossing would be equipped with an audible warning device when the roadway barriers are lowered. Due to the high density of existing and planned residential land uses along the DRC in the Newark area, if future regular passenger service on the DRC were to commence it is reasonable to assume that the operator of the future rail service and/or the City would install upgraded traffic and vehicle barriers and seek designation of the area around the Willow Street crossing as a "quiet zone" by the Federal Railroad Administration (FRA). A quiet zone is an FRA exemption to the rule requiring trains to sound their horns when approaching public highway-rail grade crossings. Within a quiet zone, train crews can still sound train horns in emergency situations or for safety reasons, but routine sounding of horns on approach to a crossing is prohibited.

Potential noise from future trains and from the at-grade crossing warning devices at Willow Street, was modeled using the FTA Noise Impact Assessment Model. The highest predicted noise levels would be in the exterior spaces of the PA2 townhome closest to the railroad tracks in the northeastern portion of the project site. This residence would be approximately 50 feet from the railroad track centerline and 500 feet from the Willow Street at-grade crossing. For Scenario 1, six commuter trains per day, the highest predicted exterior noise level is 58 dBA L_{DN}. For Scenario 2, 25 DMU trains per day, the highest predicted exterior noise level is 56 dBA L_{DN}. Printouts of the model sheet are included in Appendix D, *FTA Rail Model Output*, to this report.

The predicted future train noise levels would not exceed the City standard of 65 dBA L_{DN} for multi-family residential exterior spaces. Because the residence location analyzed would be the closest to the railroad track and also the closest to the at-grade crossing at Willow Street, all other project residences, and their outdoor spaces, would experience less noise from trains than the analyzed location. In addition, an 8-foot masonry unit sound wall is planned between the PA2 Townhomes and the DRC which would further reduce noise in ground-level exterior spaces. Therefore, train noise levels predicted for exterior spaces of all project residences would be less than the City standard of 65 dBA L_{DN}.

The PEIR Mitigation Measure 4.10-3 requires an acoustical assessment and identification of noise reduction measures (e.g., building wall, door, and window Sound Transmission Class [STC] ratings) prior to issuing building permits. Because the assessment of train noise indicates that the City noise standards would not be exceeded, the requirements of PEIR Mitigation Measure 4.10-3 are met and the possible noise reduction measures listed in the mitigation measure would not be needed. The impact would be less than significant and would not exceed the impact severity of conclusions in the PEIR.

4.3.6.1 Mitigation Measures

The PEIR included Mitigation Measure 4.10-3, which requires an acoustical assessment and identification of noise reduction measures prior to issuing building permits. As described in the impact analysis above, an assessment of future noise predicts that noise from trains and at-grade crossing warning devices would not exceed the City standard for residential multi-family outdoor noise level provided that the future rail service operator and/or the City implements a "quiet zone." Therefore, no mitigation is required.

4.3.7 Impacts from Airport Noise Conclusions in the PEIR

The PEIR concluded that the Specific Plan area is not located within two miles of an airport or within an airport land use plan area and would not be exposed to excessive noise from aircraft, and the impact would less than significant.

4.3.8 Project-Specific Airport Noise Analysis

The closest airport or private airstrip to the project site is the Palo Alto Airport, approximately 4.5 miles southwest of the project. The project site is not within the airport influence area or the 55 dBA CNEL noise contour for the Palo Alto Airport (Santa Clara County 2016). Commercial aircraft fly over the project site at altitudes between 4,000 and 10,000 feet above sea level while approaching or departing the three major commercial airports in the Bay Area: the San Francisco International Airport (approximately 18 miles northwest); the Oakland International Airport (approximately 15 miles northwest); and the Norman Mineta San Jose International Airport (approximately 12 miles southeast). According to the noise exposure maps for the three airports, the project site in not within the 65 dBA CNEL contour for any of the airports (San Francisco 2015; Port of Oakland 2006; San Jose 2009). Therefore, the project would not expose people residing or working in the project area to excessive noise levels from airports. The impact would be less than significant and would not exceed the impact severity of the conclusions in the PEIR.

4.3.8.1 Mitigation Measures

No mitigation would be required.

4.4 PEIR IMPACT 4.10-4

Traffic generated by the proposed project could significantly contribute to existing traffic noise in the area or exceed the City's established standards (threshold of significance 3).

4.4.1 Traffic Noise Conclusions in the PEIR

The PEIR concluded that traffic noise increases on Willow Street between Thornton Avenue and Central Avenue would be potentially significant. The land uses analyzed in the PEIR included medium-, medium/high-, and high-density residential uses along Willow Street which necessitated the inclusion of PEIR Mitigation Measure 4.10-4, which required a reduction in the speed limit on Willow Street to 25 mph to reduce impacts to a less-than-significant level.

4.4.2 Project-Specific Traffic Noise Analysis

TNM software was used to calculate the noise levels at the nearest NSLUs for roadway segments in the project vicinity (including the portion of Willow Street that is adjacent to the proposed project site) for the following scenarios: Existing (year 2011 from the PEIR), Existing plus Project, Cumulative (year 2035), and Cumulative plus Project. The off-site roadway modeling represents a conservative analysis that does not account for topography or attenuation provided by existing structures. Table 4, *Off-site Traffic Noise Levels*, presents the predicted noise levels and changes in L_{DN} as a result of the project. Cumulative impacts are discussed under Section 4.5.

Table 4
OFF-SITE TRAFFIC NOISE LEVELS

Roadway Segment	Distance to Nearest NSLU (feet)[1]	NSLU Type	L_{DN} at Nearest NSLU					
			Existing (2011)			Cumulative (2035)		
			2011	2011 + Project	Change in L_{DN}	2035	2035 + Project	Change in L_{DN}
Thornton Ave.								
Gateway Blvd. to Willow St.	70	SF	63.3	63.4	0.3	66.9	67.0	0.1
Willow St. to Spruce St.	40	SF	65.3	65.7	0.4	69.3	69.6	0.3
Spruce St. to Cherry St.	40	SF	66.4	66.7	0.3	69.8	69.9	0.1
Cherry St. to Newark Blvd.	45	SF	66.9	67.1	0.1	68.5	68.6	0.1
Newark Blvd. to Cedar Blvd.	45	SF	67.6	67.7	0.1	69.2	69.3	0.1
Newark Blvd.								
Cedar St. to Thornton Ave.	50	SF	67.1	67.2	0.1	70.2	70.2	<0.1
Cedar St.								
Lake Blvd. to Thornton Ave.	50	SF	65.9	65.9	<0.1	68.4	68.4	<0.1
Thornton Ave. to Central Ave.	35	SF	67.1	67.1	<0.1	69.3	69.3	<0.1
Cherry Street								
Thornton Ave. to Central Ave.	50	SF	64.6	64.7	0.1	67.6	67.6	<0.1
Central Ave. to Mowry Ave.	45	SF	67.4	67.5	0.1	70.0	70.0	<0.1
Willow St.								
Thornton Ave. to Enterprise Dr.	60	SF	61.4	62.3	0.9	64.4	64.8	0.4
Central Ave.								
Cherry St. to Cedar St.	45	SF	65.1	65.1	<0.1	67.6	67.6	<0.1
Mowry Ave.								
Cherry Street to I-880	50	SF	68.4	68.5	0.1	70.4	70.4	<0.1
Enterprise Dr.[2]								
Willow St. to Hickory St.	50	MF	-	-	-	61.6	62.1	0.5

Source: TNM version 2.5
Ave. = Avenue; Blvd. = Boulevard; Dr. = Drive; I-880 = Interstate 880; MF = Multi-Family Residential; NSLU = Noise Sensitive Land Use; SF = Single-Family Residential; St. = Street
Notes:
1 Distance measured from roadway centerline.
2 No NLSU and no traffic occur along Enterprise Drive for the segment between Willow Street and Hickory Street under existing conditions.

As shown in Table 4, the existing 60 dBA L_{DN} exterior noise standard for single-family residences would be exceeded for all roadway segments with or without the project. Under Existing + Project conditions, the highest predicted change in ambient noise for roadway segments that include existing adjacent NSLU would be 0.9 dBA L_{DN} on Willow Street. This change in permanent ambient noise level would not exceed the criterion of a 3.0 dBA or more increase where the existing ambient level is between 60 and 65 dBA L_{DN}. Therefore, the impact would be less than significant and would not exceed the severity of the impact conclusions in the PEIR.

4.4.2.1 Mitigation Measures

No mitigation would be required.

4.5 PEIR IMPACT 4.10-5

Implementation of the proposed project and other related cumulative projects anticipated by the General Plan, as most recently updated, could result in cumulatively considerable noise impacts (threshold of significance 3).

4.5.1 Cumulative Traffic Noise Impact Conclusions in the PEIR

The PEIR concluded that traffic noise increases on Willow Street between Thornton Avenue and Central Avenue would result in a potentially cumulatively considerable impact. The land uses analyzed in the PEIR included medium-, medium/high-, and high-density residential uses along Willow Street which necessitated the inclusion of the PEIR Mitigation Measure 4.10-4 which required a reduction in the speed limit on Willow Street to 25 mph and would reduce the cumulative impact to a less than significant. The PEIR concluded that the impact would be less than significant with mitigation incorporated.

4.5.2 Project-Specific Cumulative Traffic Noise Analysis

As shown in Table 3, the 60 dBA L_{DN} exterior noise standard for single-family residences would be exceeded for all roadway segments under baseline cumulative conditions (without the project). The highest predicted change in cumulative noise level as a result of the project would be 0.5 dBA L_{DN} on Enterprise Drive. This change in permanent ambient noise level would not exceed the cumulative criterion of a 1 dBA or more increase above the 'cumulative no project' condition.

Project-specific modeling was conducted for future residents of the project that would be located along Willow Street as close as 120 feet from the roadway centerline, and along Enterprise Drive as close as 50 feet from the roadway centerline. As shown in Table 4, the traffic noise from traffic for the Cumulative (year 2035) plus project scenario (the scenario with the highest traffic levels), at street level was estimated to be 64.8 dBA L_{DN} on Willow Street and 64.2 dBA L_{DN} on Enterprise Drive.

Additional modeling was conducted to estimate noise levels at the third-floor exterior spaces of the affordable housing units in the northeastern portion of the project site along Willow Street and ground floor exterior spaces for the townhomes along Enterprise Drive (see Figure 4). Units on higher floors would have lower exterior noise levels. The modeling software, input, and assumptions are described in Section 3.0, above. The predicted noise level from traffic for the modeled receivers is shown in Table 5, *Predicted Traffic for Project Residences*.

Table 5
PREDICTED TRAFFIC FOR PROJECT RESIDENCES

Receiver ID	Location	Noise Level (dBA L_{DN})
R5	Along Willow Street	64.8
R6	Along Enterprise Drive	64.2
R7	Along Enterprise Drive	62.2
R8	Along Enterprise Drive	61.7
R9	Along Enterprise Drive	61.5
R10	Along Enterprise Drive	60.6

As shown in Table 5, the maximum estimated exterior noise for second-floor exterior spaces of the affordable housing units along Willow Street and ground floor levels for the townhomes along Enterprise Drive are predicted to be 64.8 dBA L_{DN}. This modeled estimate would not exceed the City normally acceptable standard of 65 dBA L_{DN} for multi-family residential exterior spaces. The model output tables are included in Appendix C.

The PEIR Mitigation Measure 4.10-4 would require the applicant to work with the City to reduce the speed limit on Willow Street to 25 mph. However, the project site plan has been revised since the analysis in the PEIR has been conducted. Because the assessment of project and cumulative traffic noise indicates that the City noise standards would not be exceeded for project residences proposed along Willow Street, the requirements of PEIR Mitigation Measure 4.10-4 would not be needed. The impact would be less than significant and would not exceed the severity of the impact conclusions in the PEIR.

4.5.2.1 Mitigation Measures

The PEIR included Mitigation Measure 4.10-4, which required the applicant to work with the City to reduce the speed limit on Willow Street to 25 mph. As described in the impact analysis above, an assessment of future project and cumulative traffic noise predicts that exterior noise levels for project residents would not exceed the City standard for residential multi-family outdoor noise level. Therefore, no mitigation would be required.

5.0 LIST OF PREPARERS

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Appendix A

Noise Measurement Sheets

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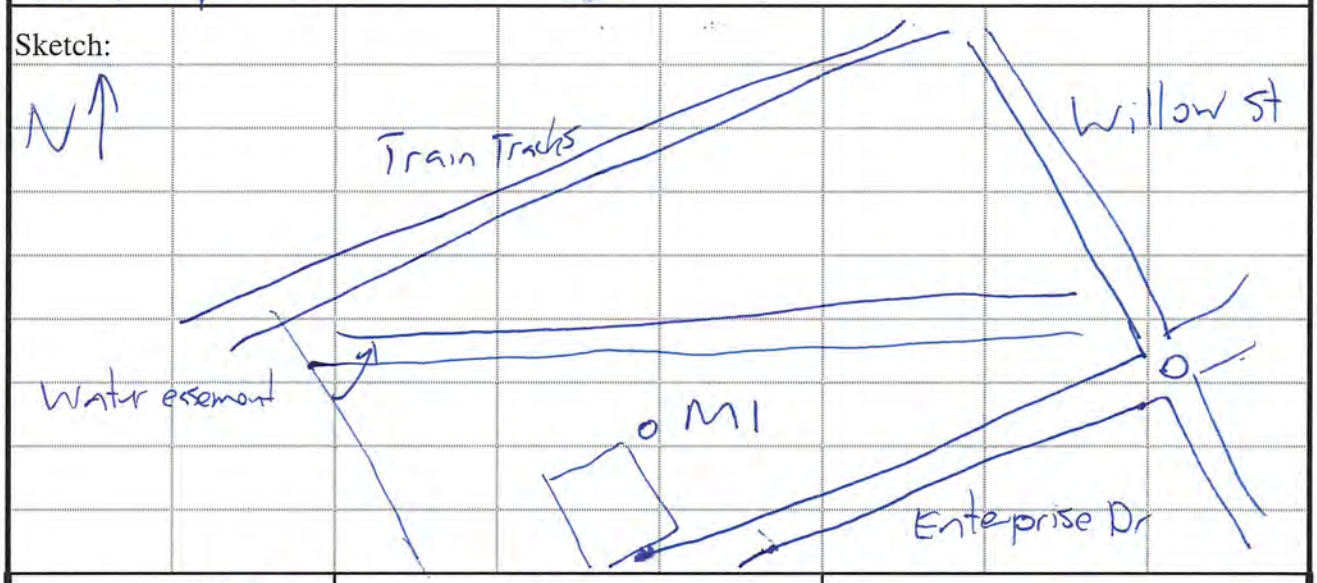
M1

Site Survey

Job # IP2-37	Project Name: Willow		
Date: 4/30/19	Site #:	Engineer: Martin Rolph	
Address:			
Meter: LDLXT1	Serial #: 1013	Calibrator: CAL150	Serial #: 5529

Notes: Construction Activity on Willo St, Enterprise Dr, and SW
Acft on SFO approach ~2 minute intervals
Back-up Alarms on street

Sketch:



Temp: 63°F	Wind Spd: 11 mph mph	Humidity: 58 %
Start of Measurement: 10:33	End of Measurement: 10:43	56.7 dBA L_{EQ}

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

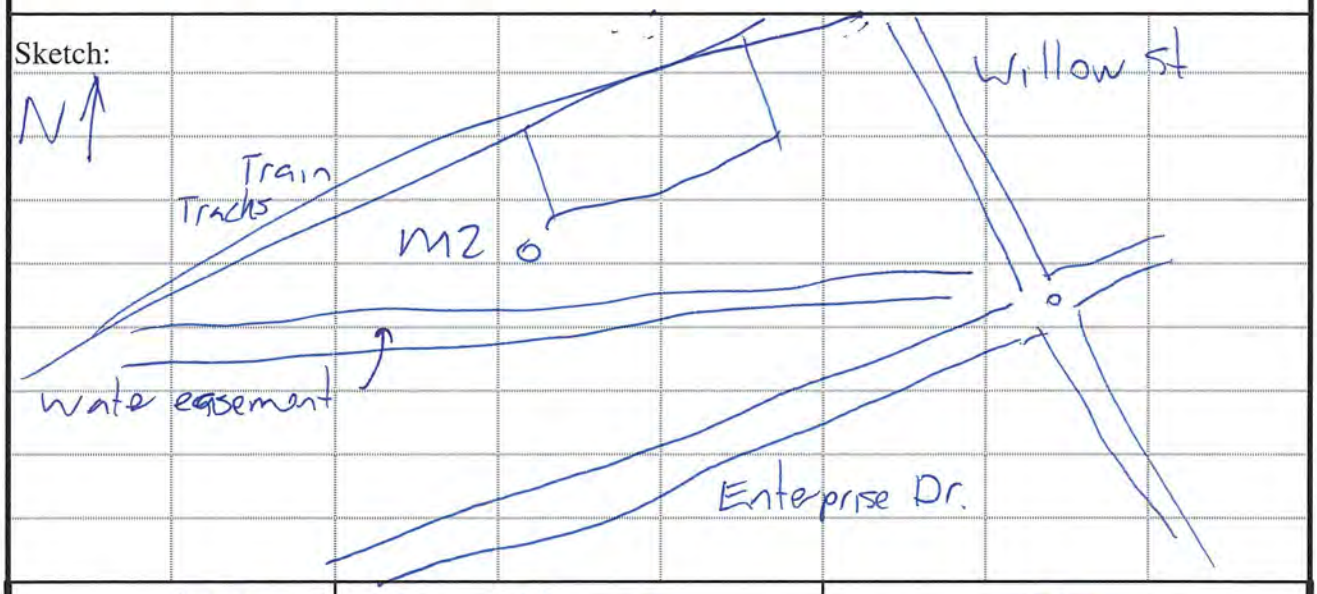
M2

Site Survey

Job # IP2-37	Project Name: Willow		
Date: 4/30/19	Site #:	Engineer: Martin Rolph	
Address:			
Meter: LDLXT1	Serial #: 1013	Calibrator: CAL150	Serial #: 5529

Notes: Construction activity on Willow St, Enterprise Dr, and SW Acft on approach to SFO ~ 2-4 minute intervals

Sketch:



Temp: 65°F	Wind Spd: 11 mph	mph	Humidity: 52	%	
Start of Measurement: 10:47	End of Measurement: 10:57		52.4	dBA L_{EQ}	

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

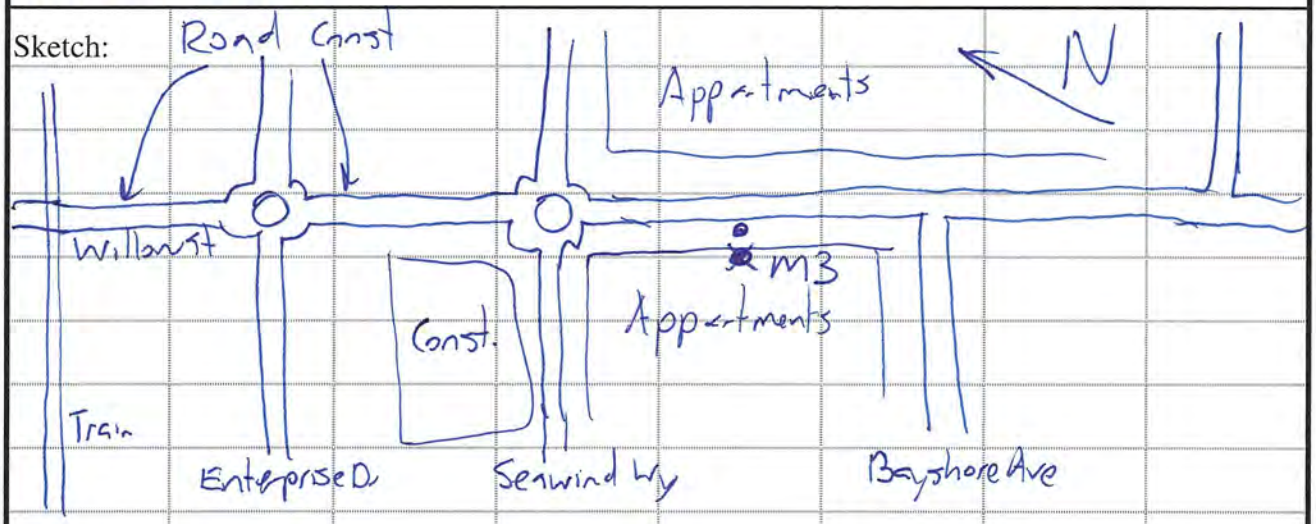
M3

Site Survey

Job # IP2-37	Project Name: Willow		
Date: 4/30/19	Site #:	Engineer: Martin Rolph	
Address:			
Meter: LD LXT1	Serial #: 1013	Calibrator: CALISO	Serial #: 5529

Notes: Aircraft on approach to SFO ~ 2-4 minute intervals
Appartments/Condos both sides of Wilow, 5' retaining wall both sides of Willow

Sketch:



Temp: 65° F	Wind Spd: 10 mph	mph	Humidity: 51	%	
Start of Measurement: 11:11	End of Measurement: 11:26		54.9	dBA L_{EQ}	

Cars (tally per 5 cars)	Medium Trucks (MT)	Heavy Trucks (HT)
~~IIII~~ I 62 cars total	III 3 MD Trucks	IIII 5 HD Trucks

Noise Measurement for Information Only

No Through Roadways

No Calibration Analysis Will Be Provided

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Appendix B

Train Vibration Calculations

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Groundborne Vibrations from Passenger Trains

Distance (feet)	50
Speed (mph)	25
	VdB
VdB (Locomotive, 50 mph)	83.8
Speed Adjustment	-6.0
Path Adjustments	
Wood Frame Coupling	-5
Receiver Adjustments	
Floor Resonance	6
2nd floor attenuation	-4
Locomotive Driven Passenger Train	**78.7**
DMU Train (-5 dB)	**73.7**

Notes:
1. Source: FTA TRANSIT NOISE AND VIBRATION IMPACT ASSESSMENT MANUAL (2018).
2. Calculations based on a locomotive driven passenger train operating at an average of 25 mph on at-grade, ballast and tie track with welded rail.
2. Vibration decibel Level (Lv) for a diesel locomotive driven passenger train:

VdB = 92.28 + 14.81log(D) - 14.17log(D)^2 + 1.65log(D)^3; where D = distance from the track centerline to the receiver.

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Appendix C

Project Residence Noise Modeling Output

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CadnaA Road Source Table

Name	M.	ID	Lme			exact Count Data						Speed Limit	
			Day	Evening	Night	M			p (%)			Auto	Truck
			(dBA)	(dBA)	(dBA)	Day	Evening	Night	Day	Evening	Night	(km/h)	(km/h)
Willow Street		Road01	63	0	0	1560	0	0	4	0	0	56	
Enterpirse Drive		Road01	58.1	0	0	500	0	0	4	0	0	56	
Entrance Drive		Road01	45.7	0	0	59	0	0	5	0	0	40	
Bus Loop		Road01	43.5	0	0	3	0	0	100	0	0	24	

CadnaA Receiver Table

Name	M.	ID	Level Lr		Limit. Value		Land Use			Height		Coordinates		
			Day	Night	Day	Night	Type	Auto	Noise Type			X	Y	Z
			(dBA)	(dBA)	(dBA)	(dBA)				(m)		(m)	(m)	(m)
R1		R1	55.2	-70.2	0	0		x	Total	1.52	r	583750.83	4153324.38	1.52
R2		R2	55.8	-67.4	0	0		x	Total	1.52	r	583760.24	4153300.47	1.52
R3		R3	57.8	-64.5	0	0		x	Total	7	r	583812.53	4153295.82	7
R4		R4	61.1	-64.9	0	0		x	Total	7	r	583861.03	4153304.8	7
R5		R5	64.8	-65.6	0	0		x	Total	10.7	r	583894.01	4153303.84	10.7
R6		R6	64.2	-65	0	0		x	Total	1.52	r	583915.66	4153214.26	1.52
R7		R7	62.2	-65.6	0	0		x	Total	1.52	r	583847.18	4153185.04	1.52
R8		R8	61.7	-65.9	0	0		x	Total	1.52	r	583791.35	4153161.38	1.52
R9		R9	61.5	-66.1	0	0		x	Total	1.52	r	583733.45	4153136.32	1.52
R10		R10	60.6	-66.8	0	0		x	Total	1.52	r	583659.25	4153104.37	1.52

Appendix D

FTA Rail Model Output

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Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	**FMC Willow Scenario 1**

Project Results Summary

Existing Ldn:	65 dBA
Total Project Ldn:	58 dBA
Total Noise Exposure:	66 dBA
Increase:	1 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour:	---
Dist to Sev. Impact Contour:	---

Receiver Parameters	
Receiver:	**Receiver 1**
Land Use Category:	**2. Residential**
Existing Noise (Measured or Generic Value):	**65 dBA**

Noise Source Parameters	
Number of Noise Sources:	**3**

Noise Source Parameters		**Source 1**
	Source Type:	Fixed Guideway
	Specific Source:	Diesel Electric Locomotive
Daytime hrs	**Avg. Number of Locos/train**	1
	Speed (mph)	25
	Avg. Number of Events/hr	0.33
Nighttime hrs	**Avg. Number of Locos/train**	1
	Speed (mph)	25
	Avg. Number of Events/hr	0.11
Distance	**Distance from Source to Receiver (ft)**	50
	Number of Intervening Rows of Buildings	0
Adjustments		

Source 1 Results

Leq(day):	54.6 dBA
Leq(night):	49.8 dBA
Ldn:	57.3 dBA

Noise Source Parameters		**Source 2**
	Source Type:	Fixed Guideway
	Specific Source:	Rail Car
Daytime hrs	**Avg. Number of Rail Cars/train**	6
	Speed (mph)	25
	Avg. Number of Events/hr	0.33
Nighttime hrs	**Avg. Number of Rail Cars/train**	6
	Speed (mph)	25
	Avg. Number of Events/hr	0.11
Distance	**Distance from Source to Receiver (ft)**	50
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No
	Joint Track/Crossover?	No
	Embedded Track?	Yes
	Aerial Structure?	No

Source 2 Results

Leq(day):	46.3 dBA
Leq(night):	41.6 dBA
Ldn:	49.1 dBA
Incremental Ldn (Src 1-2):	57.9 dBA

Noise Source Parameters		**Source 3**
	Source Type:	Fixed Guideway
	Specific Source:	Transit warning device
Daytime hrs		
	Speed (mph)	25
	Avg. Number of Events/hr	0.33
Nighttime hrs		
	Speed (mph)	25
	Avg. Number of Events/hr	0.11
Distance	**Distance from Source to Receiver (ft)**	500
	Number of Intervening Rows of Buildings	0
Adjustments		

Source 3 Results

Leq(day):	40.6 dBA
Leq(night):	35.8 dBA
Ldn:	43.3 dBA
Incremental Ldn (Src 1-3):	58.1 dBA

Federal Transit Administration
Noise Impact Assessment Spreadsheet

version: 1/29/2019

Project:	**FMC Willow Scenario 2**

Receiver Parameters	
Receiver:	**Receiver 1**
Land Use Category:	**2. Residential**
Existing Noise (Measured or Generic Value):	**65 dBA**

Noise Source Parameters	
Number of Noise Sources:	**3**

Noise Source Parameters		**Source 1**
	Source Type:	Fixed Guideway
	Specific Source:	Diesel Multiple Unit (DMU)
Daytime hrs	**Avg. Number of DMU's/train**	1
	Speed (mph)	25
	Avg. Number of Events/hr	1.4
Nighttime hrs	**Avg. Number of DMU's/train**	1
	Speed (mph)	25
	Avg. Number of Events/hr	0.44
Distance	**Distance from Source to Receiver (ft)**	50
	Number of Intervening Rows of Buildings	0
Adjustments		

Noise Source Parameters		**Source 2**
	Source Type:	Fixed Guideway
	Specific Source:	Rail Car
Daytime hrs	**Avg. Number of Rail Cars/train**	2
	Speed (mph)	25
	Avg. Number of Events/hr	1.4
Nighttime hrs	**Avg. Number of Rail Cars/train**	2
	Speed (mph)	25
	Avg. Number of Events/hr	0.44
Distance	**Distance from Source to Receiver (ft)**	50
	Number of Intervening Rows of Buildings	0
Adjustments	**Noise Barrier?**	No
	Joint Track/Crossover?	No
	Embedded Track?	Yes
	Aerial Structure?	No

Noise Source Parameters		**Source 3**
	Source Type:	Fixed Guideway
	Specific Source:	Transit warning device
Daytime hrs		
	Speed (mph)	25
	Avg. Number of Events/hr	1.4
Nighttime hrs		
	Speed (mph)	25
	Avg. Number of Events/hr	0.44
Distance	**Distance from Source to Receiver (ft)**	500
	Number of Intervening Rows of Buildings	0
Adjustments		

Project Results Summary

Existing Ldn:	65 dBA
Total Project Ldn:	56 dBA
Total Noise Exposure:	66 dBA
Increase:	1 dB
Impact?:	None

Distance to Impact Contours

Dist to Mod. Impact Contour:	---
Dist to Sev. Impact Contour:	---

Source 1 Results

Leq(day):	50.9 dBA
Leq(night):	45.8 dBA
Ldn:	53.4 dBA

Source 2 Results

Leq(day):	47.9 dBA
Leq(night):	42.8 dBA
Ldn:	50.4 dBA
Incremental Ldn (Src 1-2):	55.2 dBA

Source 3 Results

Leq(day):	46.9 dBA
Leq(night):	41.8 dBA
Ldn:	49.4 dBA
Incremental Ldn (Src 1-3):	56.2 dBA

Appendix G

Trip Generation and Intersection Operations Analysis Memorandum for the FMC Willow and Grand Park Project

FEHR PEERS

DRAFT MEMORANDUM

Date: November 19, 2021

To: Lesley Owning, HELIX Environmental Planning, Inc.

From: Jordan Brooks and Rob Rees, Fehr & Peers

Subject: Trip Generation and Intersection Operations Analysis – FMC Willow and Grand Park Project

OK19-0325

This memorandum presents the findings of the trip generation and intersection operations analysis prepared for the FMC Willow and Grand Park Project (formerly the Willow Street Mixed-Use Project) in Newark, CA (Project). Parking was not evaluated because it is our understanding that the Project meets the parking requirements and no additional studies are needed. The Project proposes construction of mixed-use affordable housing and retail space, as well as market-rate townhomes, a 5-acre park, and a bus transit station. Construction would take place on a currently vacant parcel northwest of the intersection of Willow Street and Enterprise Drive in the City of Newark. The Project site is part of a larger development area addressed in the *Dumbarton Transit Oriented Development Specific Plan Final Environmental Impact Report* (SP EIR) (Final EIR – July 2011).

PROJECT DESCRIPTION

Proposed construction of the Project includes a bus transit station with about 72 parking spaces, 279 market-rate townhomes, 91 affordable housing units, 4,000 square feet of retail space, a 5-acre park (Grand Park), and a 1,485-square-foot community building. There would be on-street parking spaces along both Willow Street and Enterprise Drive fronting the Project site.

Note that the analysis presented in this technical memorandum considers a slightly larger project than what is currently proposed. The differences between the current Project and that evaluated in this memorandum is shown in **Table 1**. As a result, the current Project is expected to have slightly less impact on the transportation network than the Project presented in this memorandum.

Table 1: FMC Willow and Grand Park Project

Land Use	Project Evaluated in Memorandum	Current Project Description	Difference
Townhomes/Condos/Apartments	289 DU	279 DU	-10 DU
Townhomes/Condos/Apartments (Affordable)	88 DU	91 DU	+3 DU
Retail/Commercial	12,100 SF	4,000 SF	-8,100 SF
Community Building	2,000 SF	1,485 SF	-515 SF
Park	5 acres	5 acres	0 acres
Bus Transit Station	72 spaces	72 spaces	0 spaces

Sources: Fehr and Peers, 2021.

PROJECT TRIP GENERATION

Trip generation is the process of estimating vehicles that would likely access the Project. Trip generation for the SP EIR was estimated using methods, formulas, and rates presented by Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 8th Edition*. To remain consistent with the SP EIR, Project trip generation was also estimated using the *Trip Generation Manual, 8th Edition*. Consistent with FMC Parcel C Project analysis, *Trip Generation Manual, 9th Edition* was used to estimate trip generation for land uses that were not evaluated in the SP EIR, except for the bus transit center, which used the *Trip Generation Manual, 10th Edition* because data was not available from earlier editions. Also consistent with the SP EIR, this analysis assumes nine percent of the traffic generated by the proposed residential development would remain internal to the SP area and 80 percent of the vehicle trips generated by commercial uses would be internal to the SP area.

The proposed Project would be located less than a half-mile from the future Dumbarton Rail Transit Station, and it would construct the bus transit station element of the Rail Station. Considering the proximity of the Project to the future Dumbarton Rail Transit Station, some Project trips are likely to shift to transit. However, the future of the Dumbarton Rail line is uncertain due to funding constraints. Therefore, as a reasonable worst-case scenario, no transit reductions were assumed in the trip generation estimates, which is consistent with the trip generation in the SP EIR.

Table 2 summarizes the trip generation for the Project evaluated in this memorandum. Since the Trip Generation Manual, 8th Edition does not differentiate between affordable housing and market-rate townhouses, this analysis combines them for 377 total residential units. Using the SP EIR internalization assumptions, the Project is estimated to generate about 1,824 daily, 132 AM peak hour, and 161 PM peak hour external vehicle trips. As noted in the "Project Description" section the current Project is slightly smaller than the Project shown in Table 2 and so would generate fewer vehicle trips than shown in the table.

CUMULATIVE SPECIFIC PLAN AREA TRIP GENERATION

Newark approved or is reviewing multiple developments within the SP area. **Table 3** summarizes the status of the SP buildout, as well as the buildout land uses assumed in the SP EIR.

Table 4 summarizes trip generation for all approved and pending developments within the SP area, including the FMC Willow and Grand Park. Consistent with the SP EIR, this analysis assumes that nine percent of the vehicle trips generated by residential uses and 80 percent of the vehicle trips generated by commercial uses from the approved and pending developments would be internal to the SP area. Internalization reductions were not applied to the proposed hotel since it is expected that the trips generated by the hotel would start or end at a location external to the SP area.

The proposed Project plus all other approved and pending projects in the SP area would generate a total of about 16,251 daily, 1,204 AM peak hour, and 1,527 PM peak hour external vehicle trips. This corresponds to about 115 percent of daily, 103 percent of the AM peak hour, and 116 percent of the PM peak hour trips assumed in the SP EIR. As noted in the "Project Description" section the current FMC Willow and Grand Park Project is slightly smaller than the Project shown in Table 4 and so would generate fewer vehicle trips than those shown in the table.

Table 2: FMC Willow and Grand Park Project Trip Generation Summary

Land Use	Units[1]	ITE Code	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
New Uses									
Retail[2]	12.1 KSF	820	520	7	5	12	22	23	45
Condominiums/Townhomes/Apartments (including 88 Affordable Units)[3]	377 DU	230	1,655	19	90	109	88	44	132
Grand Park[4]	5 Acres	412	12	0	1	1	1	0	1
Bus Transit Station[5]	72 PS	90	202	21	9	30	9	22	31
Total Project Trips			2,389	47	105	152	120	89	209
Reductions									
Retail Internalization (-80%)			*-416*	*-6*	*-4*	*-10*	*-18*	*-18*	*-36*
Townhomes/Apart Internalization (-9%)			*-149*	*-2*	*-8*	*-10*	*-8*	*-4*	*-12*
Total Internalization (-80% retail, -9% residential)[6]			*-565*	*-8*	*-12*	*-20*	*-26*	*-22*	*-48*
Net External Project Trips			**1,824**	**39**	**93**	**132**	**94**	**67**	**161**

1. KSF = 1,000 square feet, DU = dwelling units
2. Based on the *Dumbarton Transit Oriented Development Specific Plan Final Environmental Impact Report* (RBF, May 2011):
   Daily: T = 42.94 * (X);
   AM Peak Hour: T = 1 * (X) (61% in, 39% out);
   PM Peak Hour: T = 3.37 * (X) (49% in, 51% out)
3. Based on the *Dumbarton Transit Oriented Development Specific Plan Final Environmental Impact Report* (RBF, May 2011):
   Daily: T = 4.39 * (X);
   AM Peak Hour: T = 0.29 * (X) (17% in, 83% out);
   PM Peak Hour: T = 0.35 * (X) (67% in, 33% out)
4. ITE Trip Generation (8th Edition) land use category 412 (County Park):
   Daily: T = 2.28 * (X);
   AM Peak Hour: T = 0.01 * (X) (80% in, 20% out);
   PM Peak Hour: T = 0.06 * (X) 41% in, 59% out)
5. ITE Trip Generation (10th Edition) land use category 090 (Park and Ride Lot with Bus or Light Rail)
   Daily: T = 2.81 * (X);
   AM Peak Hour: T = 0.42 * (X) (69% in, 31% out);
   PM Peak Hour: T = 0.43 * (X) (28% in, 72% out)
6. As in the SP EIR, 9% of the residential trips and 80% of the commercial trips would be internal to the Specific Plan Area.

Sources: ITE *Trip Generation Manual*, 8th Edition; ITE *Trip Generation Manual,* 10th Edition; Fehr & Peers, 2021.

Table 3: Specific Plan Area Buildout Assumptions

Land Use	Units	ITE Land Use Code
Approved/Pending Developments in SP Area, Excluding Parcel C Project		
Single-Family Homes	977 DU	210
Townhomes/Condos/Apartments	557 DU	230
Senior Housing	75 DU	252
Retail/Commercial	8.3 KSF	850
Hotel	146 Rooms	310
SP Area Parcel C Project		
Single-Family Homes	192 DU	210
SP Area FMC Willow and Grand Park Project		
Townhomes/Condos/Apartments	289 DU	230
Townhomes/Condos/Apartments (Affordable)	88 DU	230
Retail/Commercial	12.1 KSF	820
Park	5 acres	412
Bus Transit Station	72 spaces	90
SP Area EIR Description		
Single-Family Homes	168 DU	210
Apartments	430 DU	220
Townhomes/Condos	1902 DU	230
Neighborhood Commercial	35 KSF	820
General Office	195 KSF	710
Future Transit Center (not part of SP EIR)		
Implementation of the proposed Specific Plan would allow a mix of residential, office, retail, park and recreational open space uses near planned future transit service along the DRC. At the same time, the Project is not dependent in any way upon proposed DRC transit service, which is a separate project undergoing environmental review by other public agencies (Source: SP EIR Chapter 3).		

Sources: Fehr and Peers, 2021.

Table 4: Specific Plan Area Trip Generation Summary

Land Use	Units[1]	ITE Code	Daily	AM Peak Hour	PM Peak Hour
Approved/Pending Developments in SP Area					
Single-Family Homes[2]	977 DU	210	9,750	743	977
Townhomes/Condos[3]	557 DU	230	2,445	162	195
Senior Housing[4]	75 DU	220	245	28	24
Market[5]	8.3 KSF	850	849	59	69
Hotel[6]	146 Rooms	310	1,193	78	89
FMC Parcel C Project[2]	192 DU	210	1,916	146	192
Retail Internalization (-80%)			*-679*	*-47*	*-55*
Townhouse/Condo/Apartment Internalization (-9%)			*-1,292*	*-97*	*-125*
Total Internalization (-80% retail, -9% residential)[7]			*-1,971*	*-144*	*-180*
Approved/Pending Developments Total External Trips			14,427	1,072	1,366
FMC Willow and Grand Park Project					
FMC Willow and Grand Park Total External Trips			1,824	132	161
SP Trip Generation Summary					
Combined Approved/Pending Total External Trips			16,251	1,204	1,527
Dumbarton TOD Specific Plan EIR Total External Trips[8]			14,131	1,165	1,320
Combined Approved/Pending External Trips as a Percentage of SP EIR Total External Trips			**115%**	**103%**	**116%**

Notes:

1. DU = dwelling units, KSF = 1,000 square feet
2. Based on the *Dumbarton Transit Oriented Development Specific Plan Final Environmental Impact Report* (RBF, May 2011):
   Daily: T = 9.98 * (X); AM Peak Hour: T = 0.76 * (X); PM Peak Hour: T = 1.00 * (X)
3. Based on the *Dumbarton Transit Oriented Development Specific Plan Final Environmental Impact Report* (RBF, May 2011):
   Daily: T = 4.39 * (X); AM Peak Hour: T = 0.29 * (X); PM Peak Hour: T = 0.35 * (X)
4. ITE *Trip Generation (9th Edition)* land use category 252 (Senior Adult Housing):
   Daily: T = 2.98 * (X) + 21.05;
   AM Peak Hour: Ln (T) = 0.84 * Ln (X) - 0.30; PM Peak Hour: Ln (T) = 0.99 * Ln (X) - 1.11
5. ITE *Trip Generation (9th Edition)* land use category 850 (Supermarket):
   Daily: T = 102.24 * (X); AM Peak Hour: T = 7.07 * (X); PM Peak Hour: T = 8.37 * (X)
6. ITE *Trip Generation (9th Edition)* land use category 310 (Hotel):
   Daily: T = 8.17 * (X); AM Peak Hour: Ln (T) = 0.85 * Ln (X) + 0.12; PM Peak Hour: T = 0.61 * (X)
7. As in the SP EIR, the following is assumed: 9% of traffic generated by residential uses and 80% of traffic generated by commercial uses would be internal to the SP area. Internalization reductions were not applied to the proposed hotel since it is expected that the trips generated by the hotel would start or end at a location external to the SP area.
8. Based on Table 4.14-6 on page 4.14-37 of the *Dumbarton TOD Specific Plan Draft EIR* (RBF, May 2011).

Sources: ITE *Trip Generation Manual*, 8th and 9th Editions; Fehr and Peers, 2021.

INTERSECTION OPERATIONS ANALYSIS

Intersection operations were evaluated at the study intersections identified in the SP EIR using the current planned SP buildout (as shown in Table 4) to assess whether intersection impacts identified in the EIR are still expected to occur.

Vehicle trip generation for the current planned SP buildout, including the FMC Willow and Grand Park Project, is summarized in Table 4. Vehicle trips were distributed to the road network using the trip distribution percentages from the SP EIR, and the distributed trips were assigned to the study intersections based on paths of travel. The assigned SP trips were then added to the Existing and Cumulative (Year 2035) traffic forecasts from the SP EIR to develop new traffic forecasts for Existing with SP Buildout and Cumulative with SP Buildout conditions based on the current planned SP buildout.

Attachment 1 provides the intersection level of service and delay results in table format from the intersection operations analysis. The summary tables in the attachment provide the results from the SP EIR as well as the updated analysis to facilitate comparisons. **Attachment 2** provides the intersection analysis worksheets.

Under Existing Plus Project (SP Buildout) Conditions, the SP EIR identified significant impacts at the following four intersections:

- Willow Street at Thornton Avenue
- Cedar Boulevard at Thornton Avenue (Significant and Unavoidable)
- Willow Street at Enterprise Drive
- Cherry Street at Mowry Avenue

Updating trip generation to represent the currently planned buildout of the SP results in identifying the same study intersections as having significant impacts. Therefore, the stated mitigation measures in the SP EIR would still be applicable. The Cedar Boulevard/Thornton Avenue intersection was identified in the SP EIR as a significant and unavoidable impact, and it would remain that way using the current SP buildout assumptions.

Under Cumulative Plus Project (SP Buildout) Conditions, the SP EIR identified significant impacts at the following nine intersections:

- SR 84 Eastbound Ramps at Thornton Avenue (Significant and Unavoidable)
- Gateway Boulevard at Thornton Avenue
- Willow Street at Thornton Avenue

- Cherry Street at Thornton Avenue (Significant and Unavoidable)
- Newark Boulevard at Thornton Avenue (Significant and Unavoidable)
- Cedar Boulevard at Thornton Avenue (Significant and Unavoidable)
- Willow Street at Enterprise Drive
- Cherry Street at Central Avenue (Significant and Unavoidable)
- Cherry Street at Mowry Avenue

Updating trip generation to represent the currently planned buildout of the SP results in identifying the same study intersections as having significant impacts. Therefore, the stated mitigation measures in the SP EIR would still be applicable. Five intersections were identified in the SP EIR as having significant and unavoidable impacts, and they would remain that way using the current SP buildout assumptions.

These findings reflect a slightly larger Project than what is currently proposed for the FMC Willow and Grand Park Project (see "Project Description" section). The current Project is slightly smaller than the Project analyzed in this memorandum and so the impacts would be slightly less.

CONCLUSION

The results of this assessment indicate that expected peak hour vehicle trip generation with the currently planned SP buildout would exceed that studied in the SP EIR. However, the increase in traffic volumes would not result in new impacts other than those identified in the SP EIR and would not affect the identified mitigation measures for those impacts. As a result, the transportation chapter does not require recirculation.

ATTACHMENTS

Attachment 1: Intersection Level of Service Tables

Attachment 2: Intersection Analysis Worksheets

ATTACHMENT 1
INTERSECTION LEVEL OF SERVICE TABLES

TABLE 4.14-7 EXISTING PLUS PROJECT CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection	Peak Hour	Existing No Project (May 2011 EIR)		Existing Plus Project (May 2011 EIR)			Existing Plus Project (2021 Analysis)		
		Delay [1] (Sec)	LOS	Delay [1] (Sec)	LOS	Significant Impact?	Delay [1] (Sec)	LOS	Significant Impact?
1. SR-84 WB Ramps/Thornton Ave	AM	9.5	A	10.7	B	No	10.1	B	No
	PM	6.1	A	7.5	A	No	7.9	A	No
2. SR-84 EB Ramps/Thornton Ave	AM	12.3	B	12.6	B	No	12.3	B	No
	PM	13.5	B	16.1	B	No	16.2	B	No
3. Gateway Blvd/Thornton Ave	AM	16.3	B	13.2	B	No	14.9	B	No
	PM	12.5	B	17.5	B	No	18.9	**B**	No
4. Jarvis Ave/Newark Blvd	AM	60.4	**E**	60.6	**E**	No	60.7	**E**	No
	PM	41.1	**D**	41.8	**D**	No	41.7	**D**	No
5. Cedar Blvd/Newark Blvd	AM	24.8	C	25.1	C	No	25.1	C	No
	PM	38.1	**D**	38.8	**D**	No	38.8	**D**	No
6. Lake Blvd/Cedar Blvd	AM	12.8	B	13	B	No	12.9	B	No
	PM	13.2	B	13.4	B	No	13.5	B	No
7. Willow St/Thornton Ave	AM	21.4	C	35.7	**D**	**Yes**	33.7	C	No
	PM	22.6	C	48.9	**D**	**Yes**	62.6	**E**	**Yes**
8. Spruce St/Thornton Ave	AM	16.6	B	21.6	C	No	23.1	C	No
	PM	10.2	B	10.4	B	No	10.5	B	No
9. Cherry St/Thornton Ave	AM	22.4	C	24.7	C	No	25.2	C	No
	PM	23.6	C	26.5	C	No	26.5	**C**	No
10. Newark Blvd/Thornton Ave	AM	22.4	C	23.5	C	No	23.7	**C**	No
	PM	24.4	C	26.9	C	No	27.1	**C**	No
11. Cedar Blvd/Thornton Ave	AM	39.7	**D**	48.4	**D**	**Yes**	51.6	**D**	**Yes**
	PM	33.7	C	38.2	**D**	**Yes**	37.9	**D**	**Yes**
12. I-880 SB Ramps/Thornton Ave	AM	10.8	B	10.5	B	No	10.5	B	No
	PM	13.1	B	13.3	B	No	13.4	B	No
13. I-880 NB Ramps/Thornton Ave	AM	9.5	A	10	A	No	9.6	A	No
	PM	10.0	A	10.2	B	No	10.2	B	No

TABLE 4.14-7 EXISTING PLUS PROJECT CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection	Peak Hour	Existing No Project (May 2011 EIR)		Existing Plus Project (May 2011 EIR)			Existing Plus Project (2021 Analysis)		
		Delay [1] (Sec)	LOS	Delay [1] (Sec)	LOS	Significant Impact?	Delay [1] (Sec)	LOS	Significant Impact?
14. Willow St/Enterprise Dr[2]	AM	9.2	A	> 55	**F**	**Yes**	> 55	**F**	**Yes**
	PM	9.6	A	> 55	**F**	**Yes**	> 55	**F**	**Yes**
15. Cherry St/Central Ave	AM	26.8	C	34.2	C	No	39.3	C	No
	PM	21.1	C	26	C	No	29.1	C	No
16. Cedar Blvd/Central Ave	AM	21.6	C	21.7	C	No	21.8	C	No
	PM	22.8	C	23	C	No	23.1	C	No
17. Cherry St/Mowry Ave	AM	33.2	C	40.8	**D**	**Yes**	41.3	**D**	**Yes**
	PM	24.2	C	31.5	C	No	37.1	**D**	**Yes**
18. I-880 SB Rams/Mowry Ave	AM	11.5	B	11.4	B	No	11.4	B	No
	PM	13.0	B	13.1	B	No	13.2	B	No
19. I-880 NB Ramps/Mowry Ave	AM	10.6	B	10.6	B	No	10.6	B	No
	PM	16.0	B	16.0	B	No	16.0	**B**	No

1. Average delay in seconds per vehicle.
2. For side-street stop controlled intersections, the delay shown is the worst delay experienced by any of the approaches.

Bold typeface indicates unacceptable LOS.

Source: Fehr & Peers; 2020

TABLE 4.14-8 EXISTING PLUS PROJECT CONDITIONS WITH MITIGATION

Intersection	Peak Hour	Existing Plus Project (May 2011 EIR)		Existing Plus Project + Mitigation (May 2011 EIR)			Existing Plus Project (2021 Analysis)		Existing Plus Project + Mitigation (2021 Analysis)		
		Delay [1] (Sec)	LOS	Delay [1] (Sec)	LOS	Significant Impact w/ Mitigation?	Delay [1] (Sec)	LOS	Delay [1] (Sec)	LOS	Significant Impact w/ Mitigation?
7. Willow St/Thornton Ave	AM	35.3	**D**	28.9	C	No	33.7	C	28	C	No
	PM	50.6	**D**	30.9	C		62.6	E	35	C	
11. Cedar Blvd/Thornton Ave	AM	48.4	**D**	Significant and Unavoidable			51.6	D	Significant and Unavoidable		
	PM	38.1	**D**				37.9	D			
14. Willow St/Enterprise Dr [2]	AM	> 55	**F**	11.7/12.0	B	No	> 55	F	5.6	A	No
	PM	> 55	**F**	12.9/15.0	B		> 55	F	13.4	B	
17. Cherry St/Mowry Ave	AM	40.7	**D**	32.2	C	No	41.3	D	33.9	C	No
	PM	31.5	C	31.7	C		37.1	D	34.4	C	

1. Average delay in seconds per vehicle.

2. Willow Street/Enterprise Drive is an unsignalized intersection under the Existing Plus Project condition, and Signalized under the mitigated condition

Bold typeface indicates unacceptable LOS.

Source: Fehr & Peers; 2020

TABLE 4.14-12 FUTURE YEAR 2035 PLUS PROJECT CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection	Peak Hour	Future Year 2035 No Project (May 2011 EIR)		Future Year 2035 Plus Project (May 2011 EIR)			Future Year 2035 Plus Project (2021 Analysis)		
		Delay[a] (Sec)	LOS	Delay[a] (Sec)	LOS	Significant Impact?	Delay[a] (Sec)	LOS	Significant Impact?
1. SR-84 WB Ramps/Thornton Ave	AM	14.2	B	14.7	B	No	14.4	B	No
	PM	11.1	B	12.1	B	No	12.4	B	No
2. SR-84 EB Ramps/Thornton Ave	AM	12.7	B	13.0	B	No	13.0	B	No
	PM	25.9	C	37.3	**D**	**Yes**	39.6	**D**	**Yes**
3. Gateway Blvd/Thornton Ave	AM	15.4	B	16.0	B	No	15.9	B	No
	PM	21.8	C	44.2	**D**	**Yes**	47.1	**D**	**Yes**
4. Jarvis Ave/Newark Blvd	AM	> 80	**F**	> 80	**F**	No	>80	**F**	No
	PM	73.9	**E**	75.3	**E**	No	75.5	**E**	No
5. Cedar Blvd/Newark Blvd	AM	69.5	**E**	70.9	**E**	No	71.1	**E**	No
	PM	79.1	**E**	> 80	**F**	No	81.3	**F**	No
6. Lake Blvd/Cedar Blvd	AM	15.8	B	16.0	B	No	15.9	B	No
	PM	16.1	B	16.2	B	No	16.3	B	No
7. Willow St/Thornton Ave	AM	22.0	C	33.5	C	No	35.7	D	**Yes**
	PM	24.4	C	61.5	**E**	**Yes**	75.1	**E**	**Yes**
8. Spruce St/Thornton Ave	AM	16.0	B	20.1	C	No	20.8	C	No
	PM	11.8	B	15.1	B	No	15.4	B	No
9. Cherry St/Thornton Ave	AM	25.8	C	30.5	C	No	32.0	C	No
	PM	42.8	**D**	51.7	**D**	**Yes**	50.6	**D**	**Yes**
10. Newark Blvd/Thornton Ave	AM	36.9	**D**	45.0	**D**	**Yes**	46.9	**D**	**Yes**
	PM	63.1	**E**	78.1	**E**	**Yes**	77.6	**E**	**Yes**
11. Cedar Blvd/Thornton Ave	AM	74.8	**E**	89.4	**F**	**Yes**	93.9	**F**	**Yes**
	PM	123.0	**F**	136.2	**F**	**Yes**	134.1	**F**	**Yes**
12. I-880 SB Ramps/Thornton Ave	AM	13.5	B	14.0	B	No	14.0	B	No
	PM	17.4	B	19.2	B	No	19.4	B	No
13. I-880 NB Ramps/Thornton Ave	AM	8.3	A	8.8	A	No	8.4	A	No
	PM	13.8	B	14.5	B	No	14.5	B	No

TABLE 4.14-12 FUTURE YEAR 2035 PLUS PROJECT CONDITIONS INTERSECTION LEVELS OF SERVICE

Intersection	Peak Hour	Future Year 2035 No Project (May 2011 EIR)		Future Year 2035 Plus Project (May 2011 EIR)			Future Year 2035 Plus Project (2021 Analysis)		
		Delay[a] (Sec)	LOS	Delay[a] (Sec)	LOS	Significant Impact?	Delay[a] (Sec)	LOS	Significant Impact?
14. Willow St/Enterprise Dr[2]	AM	14.8	B	> 55	**F**	**Yes**	> 55	**F**	**Yes**
	PM	14.4	B	> 55	**F**	**Yes**	> 55	**F**	**Yes**
15. Cherry St/Central Ave	AM	30.0	C	36.5	**D**	**Yes**	42.7	**D**	**Yes**
	PM	28.7	C	39.9	**D**	**Yes**	45.0	**D**	**Yes**
16. Cedar Blvd/Central Ave	AM	> 80	**F**	> 80	**F**	No	>80	**F**	No
	PM	> 80	**F**	> 80	**F**	No	>80	**F**	No
17. Cherry St/Mowry Ave	AM	67.4	**E**	79.9	**E**	**Yes**	83.7	**F**	**Yes**
	PM	> 80	**F**	> 80	**F**	**Yes**	>80	**F**	**Yes**
18. I-880 SB Rams/Mowry Ave	AM	11.8	B	11.8	B	No	11.8	B	No
	PM	14.1	B	14.1	B	No	14.1	B	No
19. I-880 NB Ramps/Mowry Ave	AM	10.3	B	10.9	B	No	10.9	B	No
	PM	34.9	C	35.5	**D**	**Yes**	35.4	**D**	**Yes**

a Average delay in seconds per vehicle.

*For side-street stop controlled intersections, the delay shown is the worst delay experienced by any of the approaches.

Bold typeface indicates unacceptable LOS.

Source: Fehr & Peers, March 2011.

TABLE 4.14-13 FUTURE YEAR 2035 PLUS PROJECT CONDITIONS WITH MITIGATION

Intersection	Peak Hour	Future Year 2035 Plus Project (May 2011 EIR)		Future Year 2035 Plus Project + Mitigation (May 2011 EIR)			Future Year 2035 Plus Project (2021 Analysis)		Future Year 2035 Plus Project + Mitigation (2021 Analysis)		
		Delay [1] (Sec)	LOS	Delay [1] (Sec)	LOS	Significant Impact w/ Mitigation?	Delay [1] (Sec)	LOS	Delay [1] (Sec)	LOS	Significant Impact w/ Mitigation?
2. SR-84 EB Ramps/Thornton Ave	AM	13.0	B	Significant and Unavoidable			13.0	B	Significant and Unavoidable		
	PM	37.3	**D**				39.6	**D**			
3. Gateway Blvd/Thornton Ave	AM	16.0	B	18.1	B	No	15.9	B	17.4	B	No
	PM	44.2	**D**	35.7	**D**		47.1	**D**	38.8	D	
7. Willow St/Thornton Ave	AM	33.5	C	27.3	C	No	35.7	D	27.8	C	No
	PM	61.5	**E**	36.2	**D**		75.1	**E**	41.5	D	
9. Cherry St/Thornton Ave	AM	30.5	C	Significant and Unavoidable			32.0	C	Significant and Unavoidable		
	PM	51.7	**D**				50.6	**D**			
10. Newark Blvd/Thornton Ave	AM	45.0	**D**	Significant and Unavoidable			46.9	**D**	Significant and Unavoidable		
	PM	78.1	**E**				77.6	**E**			
11. Cedar Blvd/Thornton Ave	AM	89.4	**F**	Significant and Unavoidable			93.9	**F**	Significant and Unavoidable		
	PM	> 80	**F**				134.1	**F**			
14. Willow St/Enterprise Dr [2]	AM	> 55	**F**	11.1/12.0	B	No	> 55	**F**	5.5	A	No
	PM	> 55	**F**	12.2/15.0	B		> 55	**F**	11.8	B	
15. Cherry St/Central Ave	AM	36.5	**D**	Significant and Unavoidable			42.7	**D**	Significant and Unavoidable		
	PM	39.9	**D**				45.0	**D**			
17. Cherry St/Mowry Ave	AM	79.9	**E**	78.9	**E**	No	83.7	**F**	46.0	**D**	No
	PM	> 80	**F**	> 80	**F**		>80	**F**	>80	**F**	

1. Average delay in seconds per vehicle.
2. Willow Street/Enterprise Drive is an unsignalized intersection under the Existing Plus Project condition, and Signalized under the mitigated condition

Bold typeface indicates unacceptable LOS.

Source: Fehr & Peers; 2020

ATTACHMENT 2
INTERSECTION ANALYSIS WORKSHEET

Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Scenario Report

Scenario:	Pj_AM
Command:	Existing AM + Project
Volume:	Ex_AM
Geometry:	Ex_AM
Impact Fee:	Default Impact Fee
Trip Generation:	Project AM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 84 WB Ramps / Thornton Ave.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.208
Loss Time (sec):	8	Average Delay (sec/veh):	10.2
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Thornton Ave.						84 WB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Ignore			Ignore			Include			Include		
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	0 0	2	0 1	0 0	0	0 0	1 0	0	0 1
Volume Module:7:45AM												
Base Vol:	0	252	399	0	293	732	0	0	0	115	0	45
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	252	399	0	293	732	0	0	0	115	0	45
Added Vol:	0	59	95	0	23	0	0	0	0	27	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	311	494	0	316	732	0	0	0	142	0	45
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.00	0.94	0.94	0.00	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	0	331	0	0	336	0	0	0	0	151	0	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	331	0	0	336	0	0	0	0	151	0	48
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	331	0	0	336	0	0	0	0	151	0	48
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	1.00	1.00	0.93	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1900	0	3538	1900	0	0	0	1769	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.09	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.09	0.00	0.03
Crit Moves:					****					****		
Green Time:	0.0	27.4	0.0	0.0	27.4	0.0	0.0	0.0	0.0	24.6	0.0	24.6
Volume/Cap:	0.00	0.20	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.21	0.00	0.07
Delay/Veh:	0.0	9.8	0.0	0.0	9.9	0.0	0.0	0.0	0.0	11.6	0.0	10.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.8	0.0	0.0	9.9	0.0	0.0	0.0	0.0	11.6	0.0	10.8
LOS by Move:	A	A	A	A	A	A	A	A	A	B	A	B
HCM2kAvgQ:	0	2	0	0	2	0	0	0	0	2	0	1

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 84 EB Ramps / Thornton Ave.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.470
Loss Time (sec):	8	Average Delay (sec/veh):	12.3
Optimal Cycle:	60	Level Of Service:	B

Street Name:	Thornton Ave.						84 EB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Ignore		
Min. Green:	0	10	10	0	10	10	10	10	10	0	0	0
Y+R:	0.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	0 0	2	0 1	1 0	0	1 0	0 0	0	0 0
Volume Module:7:30AM												
Base Vol:	0	471	119	0	358	61	176	0	279	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	471	119	0	358	61	176	0	279	0	0	0
Added Vol:	0	154	61	0	50	0	0	0	35	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	625	180	0	408	61	176	0	314	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.00	0.92	0.92	0.92	0.92	0.92	0.00
PHF Volume:	0	679	196	0	443	0	191	0	341	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	679	196	0	443	0	191	0	341	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	0	679	196	0	443	0	191	0	341	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	1.00	0.93	1.00	0.93	1.00	0.83	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3538	1583	0	3538	1900	1769	0	1583	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.12	0.00	0.13	0.00	0.11	0.00	0.22	0.00	0.00	0.00
Crit Moves:		****							****			
Green Time:	0.0	24.5	24.5	0.0	24.5	0.0	27.5	0.0	27.5	0.0	0.0	0.0
Volume/Cap:	0.00	0.47	0.30	0.00	0.31	0.00	0.24	0.00	0.47	0.00	0.00	0.00
Delay/Veh:	0.0	13.2	12.3	0.0	12.1	0.0	10.0	0.0	11.7	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	13.2	12.3	0.0	12.1	0.0	10.0	0.0	11.7	0.0	0.0	0.0
LOS by Move:	A	B	B	A	B	A	B	A	B	A	A	A
HCM2kAvgQ:	0	5	2	0	3	0	2	0	5	0	0	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Gateway Blvd. / Thornton Ave.

Cycle (sec):	65	Critical Vol./Cap.(X):	0.315
Loss Time (sec):	12	Average Delay (sec/veh):	14.9
Optimal Cycle:	60	Level Of Service:	B

Street Name:	Thornton Ave.						Gateway Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	2 0	1	0 0	0 0	0	0 0	1 0	0	0 2
Volume Module: >> Count Date: 17 May 2007 << 7:30-8:30 am												
Base Vol:	0	411	27	147	364	0	0	0	0	24	0	255
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	411	27	147	364	0	0	0	0	24	0	255
Added Vol:	0	215	5	0	84	0	0	0	0	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	626	32	147	448	0	0	0	0	25	0	255
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	0	688	35	162	492	0	0	0	0	27	0	280
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	688	35	162	492	0	0	0	0	27	0	280
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	688	35	162	492	0	0	0	0	27	0	280
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.73
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3538	1583	3432	1862	0	0	0	0	1769	0	2786
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.02	0.05	0.26	0.00	0.00	0.00	0.00	0.02	0.00	0.10
Crit Moves:		****		****						****		
Green Time:	0.0	25.3	25.3	7.0	32.3	0.0	0.0	0.0	0.0	20.7	0.0	27.7
Volume/Cap:	0.00	0.50	0.06	0.44	0.53	0.00	0.00	0.00	0.00	0.05	0.00	0.24
Delay/Veh:	0.0	15.4	12.5	28.0	11.8	0.0	0.0	0.0	0.0	15.3	0.0	12.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	15.4	12.5	28.0	11.8	0.0	0.0	0.0	0.0	15.3	0.0	12.0
LOS by Move:	A	B	B	C	B	A	A	A	A	B	A	B
HCM2kAvgQ:	0	5	0	2	7	0	0	0	0	0	0	2

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Jarvis Ave. / Newark Blvd.

Cycle (sec):	110	Critical Vol./Cap.(X):	1.036
Loss Time (sec):	16	Average Delay (sec/veh):	60.7
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Newark Blvd.						Jarvis Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	2 0	2	0 1	2 0	0	1 0	1 0	1	1 0
Volume Module: >> Count Date: 24 May 2006 << 7:45-8:45 am												
Base Vol:	120	536	28	141	456	604	725	101	105	70	104	213
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	120	536	28	141	456	604	725	101	105	70	104	213
Added Vol:	4	9	9	0	3	0	0	0	3	3	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	124	545	37	141	459	604	725	101	108	73	104	213
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	138	606	41	157	510	671	806	112	120	81	116	237
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	606	41	157	510	671	806	112	120	81	116	237
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	138	606	41	157	510	671	806	112	120	81	116	237
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.92	0.92	0.90	0.93	0.83	0.90	0.90	0.90	0.93	0.84	0.84
Lanes:	1.00	1.87	0.13	2.00	2.00	1.00	2.00	0.48	0.52	1.00	1.00	1.00
Final Sat.:	1769	3280	223	3432	3538	1583	3432	830	887	1769	1590	1590
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.18	0.05	0.14	0.42	0.23	0.14	0.14	0.05	0.07	0.15
Crit Moves:	****					****	****					****
Green Time:	8.3	39.6	39.6	13.7	45.0	45.0	24.9	27.7	27.7	13.0	15.8	15.8
Volume/Cap:	1.04	0.51	0.51	0.37	0.35	1.04	1.04	0.54	0.54	0.39	0.51	1.04
Delay/Veh:	138.9	28.0	28.0	44.7	22.6	77.5	84.5	37.0	37.0	46.0	44.1	105.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	138.9	28.0	28.0	44.7	22.6	77.5	84.5	37.0	37.0	46.0	44.1	105.6
LOS by Move:	F	C	C	D	C	E	F	D	D	D	D	F
HCM2kAvgQ:	9	9	9	2	6	29	19	7	7	3	4	14

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Cedar Blvd. / Newark Blvd.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.710
Loss Time (sec):	16	Average Delay (sec/veh):	25.1
Optimal Cycle:	60	Level Of Service:	C

Street Name:	Newark Blvd.						Cedar Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:7:45AM												
Base Vol:	101	360	64	225	441	34	106	216	95	93	198	235
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	101	360	64	225	441	34	106	216	95	93	198	235
Added Vol:	0	33	0	0	12	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	101	393	64	225	453	34	106	216	95	93	198	235
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	113	442	72	253	509	38	119	243	107	104	222	264
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	442	72	253	509	38	119	243	107	104	222	264
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	113	442	72	253	509	38	119	243	107	104	222	264
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.93	0.92	0.92	0.93	0.89	0.89	0.93	0.86	0.86
Lanes:	1.00	1.72	0.28	1.00	1.86	0.14	1.00	1.39	0.61	1.00	1.00	1.00
Final Sat.:	1769	2978	485	1769	3258	245	1769	2344	1031	1769	1626	1626
Capacity Analysis Module:												
Vol/Sat:	0.06	0.15	0.15	0.14	0.16	0.16	0.07	0.10	0.10	0.06	0.14	0.16
Crit Moves:		****		****			****					****
Green Time:	9.8	12.1	12.1	11.7	14.0	14.0	7.0	11.9	11.9	8.3	13.2	13.2
Volume/Cap:	0.39	0.74	0.74	0.74	0.67	0.67	0.58	0.52	0.52	0.43	0.62	0.74
Delay/Veh:	23.3	26.5	26.5	30.8	23.1	23.1	29.1	22.2	22.2	24.8	22.6	26.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.3	26.5	26.5	30.8	23.1	23.1	29.1	22.2	22.2	24.8	22.6	26.1
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	2	7	7	6	6	6	3	4	4	2	4	5

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Cedar Blvd. / Lake Blvd.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.267
Loss Time (sec):	12	Average Delay (sec/veh):	12.9
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Cedar Blvd.						Lake Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ignore			Ignore			Include		
Min. Green:	7	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 0	0 0	0	0 0	1 0	0	0 1
Volume Module:7:45AM												
Base Vol:	14	370	90	20	402	0	0	0	0	92	0	12
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	14	370	90	20	402	0	0	0	0	92	0	12
Added Vol:	0	0	10	0	0	0	0	0	0	4	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	14	370	100	20	402	0	0	0	0	96	0	12
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00	0.95	0.95	0.95
PHF Volume:	15	389	105	21	423	0	0	0	0	101	0	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	389	105	21	423	0	0	0	0	101	0	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	15	389	105	21	423	0	0	0	0	101	0	13
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.90	0.90	0.93	0.93	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	1.00	1.57	0.43	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	1769	2696	729	1769	3538	0	0	0	0	1769	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.01	0.14	0.14	0.01	0.12	0.00	0.00	0.00	0.00	0.06	0.00	0.01
Crit Moves:		****		****						****		
Green Time:	15.0	29.4	29.4	7.0	21.4	0.0	0.0	0.0	0.0	11.6	0.0	11.6
Volume/Cap:	0.03	0.30	0.30	0.10	0.34	0.00	0.00	0.00	0.00	0.30	0.00	0.04
Delay/Veh:	17.1	9.2	9.2	23.9	14.3	0.0	0.0	0.0	0.0	21.2	0.0	19.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	17.1	9.2	9.2	23.9	14.3	0.0	0.0	0.0	0.0	21.2	0.0	19.7
LOS by Move:	B	A	A	C	B	A	A	A	A	C	A	B
HCM2kAvgQ:	0	3	3	0	3	0	0	0	0	2	0	0

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2020 Analysis
Existing Plus Project AM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Thornton Ave. / Willow St.

Cycle (sec):	85	Critical Vol./Cap.(X):	0.737
Loss Time (sec):	16	Average Delay (sec/veh):	33.7
Optimal Cycle:	71	Level Of Service:	C

Street Name:	Willow St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0	0 1 0	1	0	1 1 0	1	0	0 1 0
Volume Module: >> Count Date: 17 May 2007 << 7:30-8:30 am												
Base Vol:	180	20	9	29	36	21	9	121	252	19	287	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	180	20	9	29	36	21	9	121	252	19	287	19
Added Vol:	219	1	353	0	2	0	0	0	86	132	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	399	21	362	29	38	21	9	121	338	151	287	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	424	22	385	31	40	22	10	129	360	161	305	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	424	22	385	31	40	22	10	129	360	161	305	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	424	22	385	31	40	22	10	129	360	161	305	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.83	0.93	0.93	0.93	0.93	0.83	0.83	0.93	0.97	0.97
Lanes:	1.90	0.10	1.00	1.00	0.64	0.36	1.00	1.00	1.00	1.00	0.94	0.06
Final Sat.:	3379	178	1583	1769	1136	628	1769	1574	1574	1769	1731	115
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.24	0.02	0.04	0.04	0.01	0.08	0.23	0.09	0.18	0.18
Crit Moves:			****		****				****	****		
Green Time:	25.5	25.5	25.5	10.0	10.0	10.0	10.7	24.0	24.0	9.5	22.8	22.8
Volume/Cap:	0.42	0.42	0.81	0.15	0.30	0.30	0.04	0.29	0.81	0.81	0.66	0.66
Delay/Veh:	24.1	24.1	37.6	34.0	35.1	35.1	32.8	24.0	36.5	58.4	30.8	30.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.1	24.1	37.6	34.0	35.1	35.1	32.8	24.0	36.5	58.4	30.8	30.8
LOS by Move:	C	C	D	C	D	D	C	C	D	E	C	C
HCM2kAvgQ:	5	5	12	1	2	2	0	3	10	6	9	9

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Thornton Ave. / Spruce St.

Cycle (sec):	80	Critical Vol./Cap.(X):	0.816
Loss Time (sec):	8	Average Delay (sec/veh):	23.1
Optimal Cycle:	65	Level Of Service:	C

Street Name:	Spruce St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	1! 0	0	0 0	1! 0	0	1 0	0 1	0	1 0	0 1	0
Volume Module:7:30AM												
Base Vol:	11	59	21	105	60	30	18	363	7	15	284	112
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	11	59	21	105	60	30	18	363	7	15	284	112
Added Vol:	0	0	0	0	0	6	12	322	0	0	120	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	11	59	21	105	60	36	30	685	7	15	404	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
PHF Volume:	15	81	29	144	82	49	41	938	10	21	553	153
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	81	29	144	82	49	41	938	10	21	553	153
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	15	81	29	144	82	49	41	938	10	21	553	153
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.93	0.93	0.93	0.23	0.98	0.98	0.09	0.95	0.95
Lanes:	0.12	0.65	0.23	0.52	0.30	0.18	1.00	0.99	0.01	1.00	0.78	0.22
Final Sat.:	217	1163	414	926	529	317	445	1841	19	173	1410	391
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.07	0.16	0.16	0.16	0.09	0.51	0.51	0.12	0.39	0.39
Crit Moves:		****		****				****				
Green Time:	10.9	10.0	10.0	14.5	13.6	13.6	47.5	47.5	47.5	47.5	47.5	47.5
Volume/Cap:	0.51	0.56	0.56	0.86	0.92	0.92	0.16	0.86	0.86	0.20	0.66	0.66
Delay/Veh:	33.8	36.0	36.0	51.7	63.7	63.7	7.5	20.3	20.3	8.4	12.4	12.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.8	36.0	36.0	51.7	63.7	63.7	7.5	20.3	20.3	8.4	12.4	12.4
LOS by Move:	C	D	D	D	E	E	A	C	C	A	B	B
HCM2kAvgQ:	4	4	4	10	11	11	1	22	22	0	12	12

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Thornton Ave. / Cherry St.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.709
Loss Time (sec):	16	Average Delay (sec/veh):	25.2
Optimal Cycle:	60	Level Of Service:	C

Street Name:	Cherry St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Ovl			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	0 1	0	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module: >> Count Date: 27 Sep 2006 << 7:30-8:30 am												
Base Vol:	117	135	124	47	201	25	45	343	93	132	337	28
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	117	135	124	47	201	25	45	343	93	132	337	28
Added Vol:	9	0	0	0	0	0	0	309	4	0	114	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	126	135	124	47	201	25	45	652	97	132	451	28
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	131	141	129	49	209	26	47	679	101	138	470	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	141	129	49	209	26	47	679	101	138	470	29
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	131	141	129	49	209	26	47	679	101	138	470	29
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.83	0.97	0.97	0.83	0.93	0.91	0.91	0.93	0.92	0.92
Lanes:	1.00	1.00	1.00	0.19	0.81	1.00	1.00	1.74	0.26	1.00	1.88	0.12
Final Sat.:	1817	1817	1583	350	1496	1583	1769	3021	449	1769	3301	205
Capacity Analysis Module:												
Vol/Sat:	0.07	0.08	0.08	0.14	0.14	0.02	0.03	0.22	0.22	0.08	0.14	0.14
Crit Moves:		****		****				****		****		
Green Time:	10.0	10.0	17.0	10.4	10.4	10.4	9.7	16.6	26.6	7.0	13.9	13.9
Volume/Cap:	0.43	0.46	0.29	0.81	0.81	0.10	0.16	0.81	0.51	0.67	0.61	0.61
Delay/Veh:	22.9	23.2	17.1	38.3	38.3	21.0	21.9	25.5	12.2	33.4	22.1	22.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.9	23.2	17.1	38.3	38.3	21.0	21.9	25.5	12.2	33.4	22.1	22.1
LOS by Move:	C	C	B	D	D	C	C	C	B	C	C	C
HCM2kAvgQ:	3	3	2	7	7	0	1	10	6	4	5	5

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Thornton Ave. / Newark Blvd.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.681
Loss Time (sec):	16	Average Delay (sec/veh):	23.7
Optimal Cycle:	60	Level Of Service:	C

Street Name:	Newark Blvd.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	1	0	1 0 1	1	0	1 0 1	1	0	1 0 1	1	0
Volume Module:7:45AM												
Base Vol:	126	356	51	126	319	31	52	511	54	104	433	79
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	126	356	51	126	319	31	52	511	54	104	433	79
Added Vol:	0	4	0	0	2	12	30	280	0	0	102	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	126	360	51	126	321	43	82	791	54	104	535	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	129	367	52	129	328	44	84	807	55	106	546	81
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	367	52	129	328	44	84	807	55	106	546	81
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	129	367	52	129	328	44	84	807	55	106	546	81
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.93	0.91	0.91	0.93	0.92	0.92	0.93	0.91	0.91
Lanes:	1.00	1.75	0.25	1.00	1.76	0.24	1.00	1.87	0.13	1.00	1.74	0.26
Final Sat.:	1769	3040	431	1769	3064	410	1769	3279	224	1769	3024	447
Capacity Analysis Module:												
Vol/Sat:	0.07	0.12	0.12	0.07	0.11	0.11	0.05	0.25	0.25	0.06	0.18	0.18
Crit Moves:		****		****				****		****		
Green Time:	7.0	10.0	10.0	7.0	10.0	10.0	10.6	20.0	20.0	7.0	16.4	16.4
Volume/Cap:	0.62	0.73	0.73	0.62	0.64	0.64	0.27	0.74	0.74	0.51	0.66	0.66
Delay/Veh:	31.1	28.2	28.2	31.1	25.8	25.8	21.8	20.2	20.2	27.1	21.1	21.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.1	28.2	28.2	31.1	25.8	25.8	21.8	20.2	20.2	27.1	21.1	21.1
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	3	6	6	3	5	5	2	9	9	3	7	7

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 Thornton Ave. / Cedar Blvd.

Cycle (sec):	95	Critical Vol./Cap.(X):	0.999
Loss Time (sec):	16	Average Delay (sec/veh):	51.6
Optimal Cycle:	168	Level Of Service:	D

Street Name:	Cedar Blvd.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	2 0	2 0	1	1 0	1 1	0	1 0	2 0	1
Volume Module:7:30Am												
Base Vol:	81	271	192	506	359	34	98	698	46	293	536	283
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	81	271	192	506	359	34	98	698	46	293	536	283
Added Vol:	0	0	0	0	0	4	10	270	0	0	98	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	81	271	192	506	359	38	108	968	46	293	634	283
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
PHF Volume:	93	311	221	582	413	44	124	1113	53	337	729	325
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	311	221	582	413	44	124	1113	53	337	729	325
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	93	311	221	582	413	44	124	1113	53	337	729	325
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.92	0.92	0.93	0.93	0.83
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.91	0.09	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	3354	159	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.05	0.09	0.14	0.17	0.12	0.03	0.07	0.33	0.33	0.19	0.21	0.21
Crit Moves:			****	****				****		****		
Green Time:	13.3	13.3	13.3	16.1	16.1	16.1	13.1	31.5	31.5	18.1	36.6	52.7
Volume/Cap:	0.38	0.63	1.00	1.00	0.69	0.16	0.51	1.00	1.00	1.00	0.54	0.37
Delay/Veh:	38.1	41.2	101.3	76.6	40.4	34.0	39.8	57.9	57.9	87.3	23.1	12.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.1	41.2	101.3	76.6	40.4	34.0	39.8	57.9	57.9	87.3	23.1	12.1
LOS by Move:	D	D	F	E	D	C	D	E	E	F	C	B
HCM2kAvgQ:	3	6	11	11	6	1	4	25	25	13	8	5

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2020 Analysis
Existing Plus Project AM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 Thornton Ave. / SB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.623
Loss Time (sec):	8	Average Delay (sec/veh):	10.5
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	SB 880 Ramps						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Ignore			Ignore			Ignore		
Min. Green:	0	0	0	10	0	10	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2	0	0 0 1	0	0 2	0 1	0	0 2	0 1
Volume Module: >> Count Date: 9 May 2007 << 7:45-8:45 am												
Base Vol:	0	0	0	560	0	350	0	993	328	0	935	295
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	560	0	350	0	993	328	0	935	295
Added Vol:	0	0	0	0	0	68	0	245	25	0	30	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	560	0	418	0	1238	353	0	965	295
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	0	0	0	589	0	0	0	1303	0	0	1016	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	589	0	0	0	1303	0	0	1016	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	589	0	0	0	1303	0	0	1016	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3432	0	1900	0	3538	1900	0	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.17	0.00	0.00	0.00	0.37	0.00	0.00	0.29	0.00
Crit Moves:				****				****				
Green Time:	0.0	0.0	0.0	16.5	0.0	0.0	0.0	35.5	0.0	0.0	35.5	0.0
Volume/Cap:	0.00	0.00	0.00	0.62	0.00	0.00	0.00	0.62	0.00	0.00	0.49	0.00
Delay/Veh:	0.0	0.0	0.0	20.3	0.0	0.0	0.0	8.5	0.0	0.0	7.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.3	0.0	0.0	0.0	8.5	0.0	0.0	7.2	0.0
LOS by Move:	A	A	A	C	A	A	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	6	0	0	0	7	0	0	6	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 Thornton Ave. / NB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.627
Loss Time (sec):	8	Average Delay (sec/veh):	9.6
Optimal Cycle:	OPTIMIZED	Level Of Service:	A

Street Name:	NB 880 Ramps						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Ignore			Include		
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1! 0	1	0	0	0	0	0	2	0	1	0	0	3	0	0
Volume Module: >> Count Date: 10 May 2007 << 7:15-8:15 am												
Base Vol:	318	0	236	0	0	0	0	1073	464	0	1032	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	318	0	236	0	0	0	0	1073	464	0	1032	0
Added Vol:	13	0	0	0	0	0	0	48	197	0	17	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	331	0	236	0	0	0	0	1121	661	0	1049	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.00	0.81	0.81	0.81
PHF Volume:	409	0	291	0	0	0	0	1384	0	0	1295	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	409	0	291	0	0	0	0	1384	0	0	1295	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	409	0	291	0	0	0	0	1384	0	0	1295	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	1.00	0.89	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.89	1.00
Lanes:	1.58	0.00	1.42	0.00	0.00	0.00	0.00	2.00	1.00	0.00	3.00	0.00
Final Sat.:	2689	0	2404	0	0	0	0	3538	1900	0	5083	0
Capacity Analysis Module:												
Vol/Sat:	0.15	0.00	0.12	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.25	0.00
Crit Moves:	****							****				
Green Time:	14.6	0.0	14.6	0.0	0.0	0.0	0.0	37.4	0.0	0.0	37.4	0.0
Volume/Cap:	0.63	0.00	0.50	0.00	0.00	0.00	0.00	0.63	0.00	0.00	0.41	0.00
Delay/Veh:	21.4	0.0	19.9	0.0	0.0	0.0	0.0	7.5	0.0	0.0	5.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.4	0.0	19.9	0.0	0.0	0.0	0.0	7.5	0.0	0.0	5.8	0.0
LOS by Move:	C	A	B	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	5	0	4	0	0	0	0	8	0	0	4	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 Enterprise Dr / Willow St

Average Delay (sec/veh): 96.3 Worst Case Level Of Service: F[380.0]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	1	0	1	0		0	1	1	0	1	
Volume Module:																								
Base Vol:	0	90		0			140	160		0			0		0		0		0		0		140	
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
Initial Bse:	0	90		0			140	160		0			0		0		0		0		0		140	
Added Vol:	55	197		9			28	53		139			248		4		129		42		17		128	
PasserByVol:	0	0		0			0	0		0			0		0		0		0		0		0	
Initial Fut:	55	287		9			168	213		139			248		4		129		42		17		268	
User Adj:	0.92	0.92		0.92			0.92	0.92		0.92			0.92		0.92		0.92		0.92		0.92		0.92	
PHF Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	51	264		8			155	196		128			228		4		119		39		16		247	
Reduct Vol:	0	0		0			0	0		0			0		0		0		0		0		0	
FinalVolume:	51	264		8			155	196		128			228		4		119		39		16		247	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx				4.1	xxxx	xxxxx				7.1	6.5		6.2			7.1	6.5		6.2		
FollowUpTim:	2.2	xxxx	xxxxx				2.2	xxxx	xxxxx				3.5	4.0		3.3			3.5	4.0		3.3		
Capacity Module:																								
Cnflict Vol:	324	xxxx	xxxxx				272	xxxx	xxxxx				1070	943		260			1000	1002		268		
Potent Cap.:	1236	xxxx	xxxxx				1291	xxxx	xxxxx				199	263		779			222	242		770		
Move Cap.:	1236	xxxx	xxxxx				1291	xxxx	xxxxx				111	219		779			162	202		770		
Volume/Cap:	0.04	xxxx	xxxx				0.12	xxxx	xxxx				2.05	0.02		0.15			0.24	0.08		0.32		
Level Of Service Module:																								
2Way95thQ:	0.1	xxxx	xxxxx				0.4	xxxx	xxxxx				xxxx	xxxx	xxxxx		xxxx		0.1		1.4			
Control Del:	8.0	xxxx	xxxxx				8.2	xxxx	xxxxx				xxxxx	xxxx	xxxxx		xxxxx		23.6		11.9			
LOS by Move:	A	*		*			A	*		*			*	*		*			*		C		B	
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				112	xxxx		723			167	xxxx	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				19.5	xxxx		0.6			1.1	xxxx	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				574.8	xxxx		11.0			34.5	xxxx	xxxxx			
Shared LOS:	*	*		*			*	*		*			F	*		B			D	*		*		
ApproachDel:	xxxxxx						xxxxxx						380.0						15.7					
ApproachLOS:	*						*						F						C					

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #15 Central Ave. / Cherry St.

Cycle (sec):	80	Critical Vol./Cap.(X):	0.934
Loss Time (sec):	16	Average Delay (sec/veh):	39.3
Optimal Cycle:	112	Level Of Service:	D

Street Name:	Cherry St.						Central Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 2	0	1	1 0	1	1 0	1 0	1	0 1	2 0	1	1 0
Volume Module: >> Count Date: 5 Oct 2006 << 7:15-8:15 am												
Base Vol:	482	325	133	110	442	28	3	108	527	260	185	50
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	482	325	133	110	442	28	3	108	527	260	185	50
Added Vol:	87	0	0	0	0	2	7	33	251	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	569	325	133	110	442	30	10	141	778	260	199	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	605	346	141	117	470	32	11	150	828	277	212	53
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	605	346	141	117	470	32	11	150	828	277	212	53
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	605	346	141	117	470	32	11	150	828	277	212	53
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.92	0.92	0.93	0.98	0.83	0.90	0.90	0.90
Lanes:	1.00	2.00	1.00	1.00	1.87	0.13	1.00	1.00	1.00	2.00	1.60	0.40
Final Sat.:	1769	3538	1583	1769	3280	223	1769	1862	1583	3432	2743	689
Capacity Analysis Module:												
Vol/Sat:	0.34	0.10	0.09	0.07	0.14	0.14	0.01	0.08	0.52	0.08	0.08	0.08
Crit Moves:	****				****				****	****		
Green Time:	29.3	24.4	31.4	17.1	12.3	21.5	9.2	15.5	44.7	7.0	13.2	13.2
Volume/Cap:	0.94	0.32	0.23	0.31	0.94	0.53	0.05	0.42	0.94	0.92	0.47	0.47
Delay/Veh:	45.4	21.6	16.4	26.9	57.3	25.6	31.6	29.1	33.0	68.3	30.8	30.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.4	21.6	16.4	26.9	57.3	25.6	31.6	29.1	33.0	68.3	30.8	30.8
LOS by Move:	D	C	B	C	E	C	C	C	C	E	C	C
HCM2kAvgQ:	19	4	2	3	11	6	0	4	24	7	4	4

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Central Ave. / Cedar Blvd.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.520
Loss Time (sec):	16	Average Delay (sec/veh):	21.8
Optimal Cycle:	60	Level Of Service:	C

Street Name:	Cedar Blvd.						Central Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	1 0		1 0 1	1 0		1 0 1	1 0		1 0 1	1 0	
Volume Module:7:30AN												
Base Vol:	65	245	73	166	451	72	77	262	87	113	210	79
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	65	245	73	166	451	72	77	262	87	113	210	79
Added Vol:	0	0	0	0	0	0	0	29	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	65	245	73	166	451	72	77	291	87	113	222	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	68	258	77	175	475	76	81	306	92	119	234	83
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	258	77	175	475	76	81	306	92	119	234	83
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	68	258	77	175	475	76	81	306	92	119	234	83
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.90	0.90	0.93	0.91	0.91	0.93	0.90	0.90	0.93	0.89	0.89
Lanes:	1.00	1.54	0.46	1.00	1.72	0.28	1.00	1.54	0.46	1.00	1.48	0.52
Final Sat.:	1769	2633	785	1769	2987	477	1769	2631	787	1769	2508	892
Capacity Analysis Module:												
Vol/Sat:	0.04	0.10	0.10	0.10	0.16	0.16	0.05	0.12	0.12	0.07	0.09	0.09
Crit Moves:	****			****			****			****		
Green Time:	7.0	14.2	14.2	10.0	17.2	17.2	8.2	12.6	12.6	7.3	11.7	11.7
Volume/Cap:	0.33	0.41	0.41	0.60	0.56	0.56	0.34	0.56	0.56	0.56	0.48	0.48
Delay/Veh:	25.3	19.7	19.7	26.5	18.9	18.9	24.3	22.2	22.2	28.0	22.0	22.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.3	19.7	19.7	26.5	18.9	18.9	24.3	22.2	22.2	28.0	22.0	22.0
LOS by Move:	C	B	B	C	B	B	C	C	C	C	C	C
HCM2kAvgQ:	2	3	3	4	5	5	2	4	4	3	3	3

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2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Mowry Ave. / Cherry St.

Cycle (sec):	105	Critical Vol./Cap.(X):	0.856
Loss Time (sec):	16	Average Delay (sec/veh):	41.3
Optimal Cycle:	104	Level Of Service:	D

Street Name:	Cherry St.						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	2 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module: >> Count Date: 3 Oct 2006 << 7:15-8:15 am												
Base Vol:	54	1048	348	50	598	55	16	21	12	313	134	469
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	1048	348	50	598	55	16	21	12	313	134	469
Added Vol:	0	6	0	231	19	0	0	0	0	0	0	79
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	54	1054	348	281	617	55	16	21	12	313	134	548
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	60	1171	387	312	686	61	18	23	13	348	149	609
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	1171	387	312	686	61	18	23	13	348	149	609
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	60	1171	387	312	686	61	18	23	13	348	149	609
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	1862	1583	1769	1862	1583
Capacity Analysis Module:												
Vol/Sat:	0.03	0.33	0.24	0.09	0.19	0.04	0.01	0.01	0.01	0.20	0.08	0.38
Crit Moves:		****		****			****					****
Green Time:	12.4	37.9	37.9	10.4	36.0	36.0	7.0	13.3	25.6	27.4	33.7	44.1
Volume/Cap:	0.29	0.92	0.68	0.92	0.57	0.11	0.15	0.10	0.03	0.75	0.25	0.92
Delay/Veh:	43.1	42.5	31.6	75.4	28.8	23.7	46.8	40.8	30.3	42.6	26.6	46.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	43.1	42.5	31.6	75.4	28.8	23.7	46.8	40.8	30.3	42.6	26.6	46.3
LOS by Move:	D	D	C	E	C	C	D	D	C	D	C	D
HCM2kAvgQ:	2	23	11	8	10	1	1	1	0	12	4	23

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Mowry Ave. / SB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.362
Loss Time (sec):	8	Average Delay (sec/veh):	11.4
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	SB 880 Ramps						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Ignore			Ovl			Ignore			Ignore		
Min. Green:	0	0	0	10	0	10	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	2	0 0	3 0	1	0 0	3 0	1
Volume Module:8:00AM												
Base Vol:	0	0	0	546	0	251	0	524	415	0	678	815
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	546	0	251	0	524	415	0	678	815
Added Vol:	0	0	0	1	0	0	0	47	176	0	76	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	547	0	251	0	571	591	0	754	815
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.98	0.98	0.00	0.98	0.98	0.98	0.98	0.98	0.00	0.98	0.98	0.00
PHF Volume:	0	0	0	558	0	256	0	583	0	0	769	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	558	0	256	0	583	0	0	769	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	558	0	256	0	583	0	0	769	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.73	1.00	0.89	1.00	1.00	0.89	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3432	0	2786	0	5083	1900	0	5083	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.16	0.00	0.09	0.00	0.11	0.00	0.00	0.15	0.00
Crit Moves:				****							****	
Green Time:	0.0	0.0	0.0	26.9	0.0	26.9	0.0	25.1	0.0	0.0	25.1	0.0
Volume/Cap:	0.00	0.00	0.00	0.36	0.00	0.20	0.00	0.27	0.00	0.00	0.36	0.00
Delay/Veh:	0.0	0.0	0.0	11.0	0.0	10.1	0.0	11.6	0.0	0.0	12.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	11.0	0.0	10.1	0.0	11.6	0.0	0.0	12.1	0.0
LOS by Move:	A	A	A	B	A	B	A	B	A	A	B	A
HCM2kAvgQ:	0	0	0	4	0	2	0	3	0	0	3	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Mowry Ave. / NB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.334
Loss Time (sec):	8	Average Delay (sec/veh):	10.6
Optimal Cycle:	60	Level Of Service:	B

Street Name:	NB 880 Ramps						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Ovl			Ignore			Ignore			Ignore		
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 0	0	2	0 0	0	0 0	0 0	3	0 1	0 0	4	0 1
Volume Module:7:45AM												
Base Vol:	209	0	400	0	0	0	0	819	174	0	1278	678
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	209	0	400	0	0	0	0	819	174	0	1278	678
Added Vol:	61	0	0	0	0	0	0	48	0	0	16	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	270	0	400	0	0	0	0	867	174	0	1294	680
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.00	0.93	0.93	0.00	0.93	0.93	0.00
PHF Volume:	290	0	430	0	0	0	0	932	0	0	1391	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	0	430	0	0	0	0	932	0	0	1391	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	290	0	430	0	0	0	0	932	0	0	1391	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.73	1.00	1.00	1.00	1.00	0.89	1.00	1.00	0.89	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	0.00	4.00	1.00
Final Sat.:	3432	0	2786	0	0	0	0	5083	1900	0	6778	1900
Capacity Analysis Module:												
Vol/Sat:	0.08	0.00	0.15	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.21	0.00
Crit Moves:	****										****	
Green Time:	22.3	0.0	22.3	0.0	0.0	0.0	0.0	29.7	0.0	0.0	29.7	0.0
Volume/Cap:	0.23	0.00	0.42	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.42	0.00
Delay/Veh:	13.0	0.0	14.3	0.0	0.0	0.0	0.0	9.5	0.0	0.0	9.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.0	0.0	14.3	0.0	0.0	0.0	0.0	9.5	0.0	0.0	9.7	0.0
LOS by Move:	B	A	B	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	2	0	4	0	0	0	0	4	0	0	5	0

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2020 Analysis
Existing Plus Project AM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Scenario Report

Scenario:	Pj_PM
Command:	Existing PM + Project
Volume:	Ex_PM
Geometry:	EX_PM
Impact Fee:	Default Impact Fee
Trip Generation:	Project PM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 84 WB Ramps / Thornton Ave.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.488
Loss Time (sec):	8	Average Delay (sec/veh):	7.9
Optimal Cycle:	OPTIMIZED	Level Of Service:	A

Street Name:	Thornton Ave.						84 WB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Ignore			Ignore			Include			Include		
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	0 0	2	0 1	0 0	0	0 0	1 0	0	0 1
Volume Module:5:00PM												
Base Vol:	0	937	225	0	204	189	0	0	0	126	0	6
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	937	225	0	204	189	0	0	0	126	0	6
Added Vol:	0	40	62	0	64	0	0	0	0	66	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	977	287	0	268	189	0	0	0	192	0	6
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.00	0.91	0.91	0.00	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	0	1074	0	0	295	0	0	0	0	211	0	7
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1074	0	0	295	0	0	0	0	211	0	7
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1074	0	0	295	0	0	0	0	211	0	7
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	1.00	1.00	0.93	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1900	0	3538	1900	0	0	0	1769	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.30	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.12	0.00	0.00
Crit Moves:		****								****		
Green Time:	0.0	37.3	0.0	0.0	37.3	0.0	0.0	0.0	0.0	14.7	0.0	14.7
Volume/Cap:	0.00	0.49	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.49	0.00	0.02
Delay/Veh:	0.0	6.3	0.0	0.0	4.7	0.0	0.0	0.0	0.0	20.3	0.0	17.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	6.3	0.0	0.0	4.7	0.0	0.0	0.0	0.0	20.3	0.0	17.2
LOS by Move:	A	A	A	A	A	A	A	A	A	C	A	B
HCM2kAvgQ:	0	5	0	0	1	0	0	0	0	4	0	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 84 EB Ramps / Thornton Ave.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.751
Loss Time (sec):	8	Average Delay (sec/veh):	16.2
Optimal Cycle:	60	Level Of Service:	B

Street Name:	Thornton Ave.						84 EB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Ignore		
Min. Green:	0	10	10	0	10	10	10	10	10	0	0	0
Y+R:	0.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	0 0	2	0 1	1 0	0	1 0	0 0	0	0 0
Volume Module:5:00PM												
Base Vol:	0	366	116	0	260	29	708	2	599	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	366	116	0	260	29	708	2	599	0	0	0
Added Vol:	0	101	43	0	130	0	0	0	102	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	467	159	0	390	29	708	2	701	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.00	0.89	0.89	0.89	0.89	0.89	0.00
PHF Volume:	0	525	179	0	438	0	796	2	788	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	525	179	0	438	0	796	2	788	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	0	525	179	0	438	0	796	2	788	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	1.00	0.93	1.00	0.83	0.83	0.83	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	1.00	0.01	0.99	0.00	0.00	0.00
Final Sat.:	0	3538	1583	0	3538	1900	1583	5	1578	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.11	0.00	0.12	0.00	0.50	0.50	0.50	0.00	0.00	0.00
Crit Moves:		****					****					
Green Time:	0.0	11.8	11.8	0.0	11.8	0.0	40.2	40.2	40.2	0.0	0.0	0.0
Volume/Cap:	0.00	0.75	0.57	0.00	0.63	0.00	0.75	0.75	0.75	0.00	0.00	0.00
Delay/Veh:	0.0	27.3	24.3	0.0	23.9	0.0	9.7	9.5	9.5	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	27.3	24.3	0.0	23.9	0.0	9.7	9.5	9.5	0.0	0.0	0.0
LOS by Move:	A	C	C	A	C	A	A	A	A	A	A	A
HCM2kAvgQ:	0	5	3	0	4	0	12	11	11	0	0	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Note: Queue reported is the number of cars per lane.
****

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Newark-Dumbarton Rail SAP
2020 Analysis
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Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Gateway Blvd. / Thornton Ave.

Cycle (sec):	75	Critical Vol./Cap.(X):	0.693
Loss Time (sec):	12	Average Delay (sec/veh):	18.9
Optimal Cycle:	90	Level Of Service:	B

Street Name:	Thornton Ave.						Gateway Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	2 0	1	0 0	0 0	0	0 0	1 0	0	0 2
Volume Module: >> Count Date: 17 May 2007 <<												
Base Vol:	0	330	34	266	613	0	0	0	0	37	0	207
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	330	34	266	613	0	0	0	0	37	0	207
Added Vol:	0	144	3	0	232	0	0	0	0	5	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	474	37	266	845	0	0	0	0	42	0	207
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
PHF Volume:	0	578	45	324	1030	0	0	0	0	51	0	252
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	578	45	324	1030	0	0	0	0	51	0	252
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	578	45	324	1030	0	0	0	0	51	0	252
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.73
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3538	1583	3432	1862	0	0	0	0	1769	0	2786
Capacity Analysis Module:												
Vol/Sat:	0.00	0.16	0.03	0.09	0.55	0.00	0.00	0.00	0.00	0.03	0.00	0.09
Crit Moves:					****					****		
Green Time:	0.0	13.8	13.8	39.2	53.0	0.0	0.0	0.0	0.0	10.0	0.0	49.2
Volume/Cap:	0.00	0.89	0.15	0.18	0.78	0.00	0.00	0.00	0.00	0.22	0.00	0.14
Delay/Veh:	0.0	43.9	26.0	9.5	10.4	0.0	0.0	0.0	0.0	29.5	0.0	4.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	43.9	26.0	9.5	10.4	0.0	0.0	0.0	0.0	29.5	0.0	4.9
LOS by Move:	A	D	C	A	B	A	A	A	A	C	A	A
HCM2kAvgQ:	0	8	1	2	16	0	0	0	0	1	0	1

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Note: Queue reported is the number of cars per lane.
****

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Jarvis Ave. / Newark Blvd.

Cycle (sec):	80	Critical Vol./Cap.(X):	0.933
Loss Time (sec):	16	Average Delay (sec/veh):	41.7
Optimal Cycle:	112	Level Of Service:	D

Street Name:	Newark Blvd.						Jarvis Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	1 0		2 0 2	0 1		2 0 0	1 0		1 0 1	1 0	
Volume Module: >> Count Date: 24 May 2006 << 5:00-6:00 pm												
Base Vol:	156	509	66	435	627	446	686	166	162	174	170	233
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	156	509	66	435	627	446	686	166	162	174	170	233
Added Vol:	4	6	6	0	10	0	0	0	5	10	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	160	515	72	435	637	446	686	166	167	184	170	233
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	167	536	75	453	664	465	715	173	174	192	177	243
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	167	536	75	453	664	465	715	173	174	192	177	243
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	167	536	75	453	664	465	715	173	174	192	177	243
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.90	0.93	0.83	0.90	0.91	0.91	0.93	0.85	0.85
Lanes:	1.00	1.75	0.25	2.00	2.00	1.00	2.00	0.50	0.50	1.00	1.00	1.00
Final Sat.:	1769	3048	426	3432	3538	1583	3432	859	864	1769	1615	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.18	0.18	0.13	0.19	0.29	0.21	0.20	0.20	0.11	0.11	0.15
Crit Moves:	****					****	****					****
Green Time:	8.1	19.0	19.0	14.3	25.2	25.2	17.9	20.0	20.0	10.8	12.9	12.9
Volume/Cap:	0.93	0.74	0.74	0.74	0.60	0.93	0.93	0.81	0.81	0.81	0.68	0.93
Delay/Veh:	83.8	31.8	31.8	36.0	24.0	51.3	48.7	38.9	38.9	51.6	34.7	59.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	83.8	31.8	31.8	36.0	24.0	51.3	48.7	38.9	38.9	51.6	34.7	59.6
LOS by Move:	F	C	C	D	C	D	D	D	D	D	C	E
HCM2kAvgQ:	8	9	9	6	7	13	11	9	9	7	6	10

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Cedar Blvd. / Newark Blvd.

Cycle (sec):	90	Critical Vol./Cap.(X):	0.877
Loss Time (sec):	16	Average Delay (sec/veh):	38.8
Optimal Cycle:	102	Level Of Service:	D

Street Name:	Newark Blvd.						Cedar Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:5:00PM												
Base Vol:	98	411	26	512	953	110	90	159	70	87	251	335
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	98	411	26	512	953	110	90	159	70	87	251	335
Added Vol:	0	21	0	0	35	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	98	432	26	512	988	110	90	159	70	87	251	335
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	104	460	28	545	1051	117	96	169	74	93	267	356
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	104	460	28	545	1051	117	96	169	74	93	267	356
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	104	460	28	545	1051	117	96	169	74	93	267	356
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.92	0.92	0.93	0.92	0.92	0.93	0.89	0.89	0.93	0.85	0.85
Lanes:	1.00	1.89	0.11	1.00	1.80	0.20	1.00	1.39	0.61	1.00	1.00	1.00
Final Sat.:	1769	3307	199	1769	3136	349	1769	2343	1032	1769	1617	1617
Capacity Analysis Module:												
Vol/Sat:	0.06	0.14	0.14	0.31	0.34	0.34	0.05	0.07	0.07	0.05	0.17	0.22
Crit Moves:		****		****			****					****
Green Time:	8.5	14.0	14.0	30.9	36.4	36.4	7.0	17.1	17.1	12.0	22.1	22.1
Volume/Cap:	0.63	0.90	0.90	0.90	0.83	0.83	0.70	0.38	0.38	0.39	0.67	0.90
Delay/Veh:	46.7	54.7	54.7	44.0	28.2	28.2	54.9	32.2	32.2	36.8	32.6	47.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.7	54.7	54.7	44.0	28.2	28.2	54.9	32.2	32.2	36.8	32.6	47.1
LOS by Move:	D	D	D	D	C	C	D	C	C	D	C	D
HCM2kAvgQ:	4	10	10	18	18	18	4	3	3	2	7	12

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Cedar Blvd. / Lake Blvd.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.369
Loss Time (sec):	12	Average Delay (sec/veh):	13.5
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Cedar Blvd.						Lake Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ignore			Ignore			Include		
Min. Green:	7	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 0	0 0	0	0 0	1 0	0	0 1
Volume Module:5:00PM												
Base Vol:	13	514	91	70	503	0	0	0	0	107	0	5
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	514	91	70	503	0	0	0	0	107	0	5
Added Vol:	0	0	7	0	0	0	0	0	0	11	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	514	98	70	503	0	0	0	0	118	0	5
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.00	0.96	0.96	0.00	0.96	0.96	0.96
PHF Volume:	14	535	102	73	524	0	0	0	0	123	0	5
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	14	535	102	73	524	0	0	0	0	123	0	5
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	14	535	102	73	524	0	0	0	0	123	0	5
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.93	0.93	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	1.00	1.68	0.32	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	1769	2900	553	1769	3538	0	0	0	0	1769	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.01	0.18	0.18	0.04	0.15	0.00	0.00	0.00	0.00	0.07	0.00	0.00
Crit Moves:		****		****						****		
Green Time:	15.1	29.8	29.8	7.0	21.6	0.0	0.0	0.0	0.0	11.2	0.0	11.2
Volume/Cap:	0.03	0.37	0.37	0.35	0.41	0.00	0.00	0.00	0.00	0.37	0.00	0.02
Delay/Veh:	16.9	9.5	9.5	25.5	14.6	0.0	0.0	0.0	0.0	22.0	0.0	19.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	16.9	9.5	9.5	25.5	14.6	0.0	0.0	0.0	0.0	22.0	0.0	19.9
LOS by Move:	B	A	A	C	B	A	A	A	A	C	A	B
HCM2kAvgQ:	0	4	4	1	4	0	0	0	0	2	0	0

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2020 Analysis
Existing Plus Project PM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Thornton Ave. / Willow St.

Cycle (sec):	110	Critical Vol./Cap.(X):	0.914
Loss Time (sec):	16	Average Delay (sec/veh):	62.6
Optimal Cycle:	130	Level Of Service:	E

Street Name:	Willow St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0	0 1	1	0 1	1 0	1	0	0 1 0
Volume Module: >> Count Date: 17 May 2007 << 5:00-6:00 pm												
Base Vol:	112	8	123	18	6	8	42	402	253	10	170	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	112	8	123	18	6	8	42	402	253	10	170	29
Added Vol:	147	3	233	0	3	0	0	0	237	381	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	259	11	356	18	9	8	42	402	490	391	170	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	267	11	367	19	9	8	43	414	505	403	175	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	267	11	367	19	9	8	43	414	505	403	175	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	267	11	367	19	9	8	43	414	505	403	175	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.91	0.91	0.93	0.85	0.85	0.93	0.96	0.96
Lanes:	1.92	0.08	1.00	1.00	0.53	0.47	1.00	1.00	1.00	1.00	0.85	0.15
Final Sat.:	3408	145	1583	1769	916	814	1769	1624	1624	1769	1556	265
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.23	0.01	0.01	0.01	0.02	0.26	0.31	0.23	0.11	0.11
Crit Moves:			****	****					****	****		
Green Time:	25.3	25.3	25.3	10.0	10.0	10.0	21.2	33.9	33.9	24.8	37.5	37.5
Volume/Cap:	0.34	0.34	1.01	0.12	0.11	0.11	0.13	0.83	1.01	1.01	0.33	0.33
Delay/Veh:	35.7	35.7	92.0	46.3	46.2	46.2	36.9	40.6	70.2	90.0	27.2	27.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.7	35.7	92.0	46.3	46.2	46.2	36.9	40.6	70.2	90.0	27.2	27.2
LOS by Move:	D	D	F	D	D	D	D	D	E	F	C	C
HCM2kAvgQ:	4	4	18	1	1	1	1	15	23	20	5	5

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2020 Analysis
Existing Plus Project PM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Thornton Ave. / Spruce St.

Cycle (sec):	95	Critical Vol./Cap.(X):	0.521
Loss Time (sec):	8	Average Delay (sec/veh):	10.5
Optimal Cycle:	60	Level Of Service:	B

Street Name:	Spruce St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1! 0	1	0	0 1	0	1	0 0 1 0
Volume Module:5:00PM												
Base Vol:	8	19	29	44	22	16	16	466	11	38	272	53
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	8	19	29	44	22	16	16	466	11	38	272	53
Added Vol:	0	0	0	0	0	14	9	212	0	0	347	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	8	19	29	44	22	30	25	678	11	38	619	53
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
PHF Volume:	8	20	30	46	23	31	26	706	11	40	645	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	20	30	46	23	31	26	706	11	40	645	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	20	30	46	23	31	26	706	11	40	645	55
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.91	0.91	0.92	0.92	0.92	0.30	0.98	0.98	0.29	0.97	0.97
Lanes:	0.14	0.34	0.52	0.46	0.23	0.31	1.00	0.98	0.02	1.00	0.92	0.08
Final Sat.:	246	583	890	800	400	545	564	1829	30	547	1695	145
Capacity Analysis Module:												
Vol/Sat:	0.03	0.03	0.03	0.06	0.06	0.06	0.05	0.39	0.39	0.07	0.38	0.38
Crit Moves:	****			****				****				
Green Time:	10.0	10.0	10.0	10.0	10.0	10.0	67.0	67.0	67.0	67.0	67.0	67.0
Volume/Cap:	0.32	0.32	0.32	0.54	0.54	0.54	0.07	0.55	0.55	0.10	0.54	0.54
Delay/Veh:	40.4	40.4	40.4	43.7	43.7	43.7	4.4	7.2	7.2	4.6	7.1	7.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.4	40.4	40.4	43.7	43.7	43.7	4.4	7.2	7.2	4.6	7.1	7.1
LOS by Move:	D	D	D	D	D	D	A	A	A	A	A	A
HCM2kAvgQ:	2	2	2	4	4	4	0	10	10	0	10	10

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Thornton Ave. / Cherry St.

Cycle (sec):	65	Critical Vol./Cap.(X):	0.784
Loss Time (sec):	16	Average Delay (sec/veh):	26.5
Optimal Cycle:	69	Level Of Service:	C

Street Name:	Cherry St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Ovl			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	0	1	0 0 1	1	0	1 1 0	1	0	1 1 0
Volume Module: >> Count Date: 27 Sep 2006 << 5:00-6:00 pm												
Base Vol:	138	191	169	50	140	27	52	474	125	156	359	47
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	138	191	169	50	140	27	52	474	125	156	359	47
Added Vol:	7	0	0	0	0	0	0	202	11	0	332	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	145	191	169	50	140	27	52	676	136	156	691	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	161	212	188	56	156	30	58	751	151	173	768	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	161	212	188	56	156	30	58	751	151	173	768	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	161	212	188	56	156	30	58	751	151	173	768	52
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.83	0.97	0.97	0.83	0.93	0.91	0.91	0.93	0.92	0.92
Lanes:	1.00	1.00	1.00	0.26	0.74	1.00	1.00	1.67	0.33	1.00	1.87	0.13
Final Sat.:	1823	1823	1583	484	1354	1583	1769	2872	578	1769	3279	223
Capacity Analysis Module:												
Vol/Sat:	0.09	0.12	0.12	0.11	0.11	0.02	0.03	0.26	0.26	0.10	0.23	0.23
Crit Moves:		****			****			****			****	
Green Time:	10.0	10.0	17.9	10.0	10.0	10.0	9.1	21.1	31.1	7.9	19.9	19.9
Volume/Cap:	0.57	0.76	0.43	0.75	0.75	0.12	0.23	0.81	0.55	0.81	0.77	0.77
Delay/Veh:	26.8	33.0	20.0	36.7	36.7	23.9	25.3	24.5	12.4	47.4	23.8	23.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	26.8	33.0	20.0	36.7	36.7	23.9	25.3	24.5	12.4	47.4	23.8	23.8
LOS by Move:	C	C	C	D	D	C	C	C	B	D	C	C
HCM2kAvgQ:	4	6	4	6	6	1	1	11	7	6	10	10

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Thornton Ave. / Newark Blvd.

Cycle (sec):	65	Critical Vol./Cap.(X):	0.774
Loss Time (sec):	16	Average Delay (sec/veh):	27.1
Optimal Cycle:	68	Level Of Service:	C

Street Name:	Newark Blvd.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	1	0	1 0 1	1	0	1 0 1	1	0	1 0 1	1	0
Volume Module:5:00PM												
Base Vol:	130	209	90	122	304	117	129	588	124	175	427	73
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	130	209	90	122	304	117	129	588	124	175	427	73
Added Vol:	0	3	0	0	4	32	20	181	0	0	300	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	130	212	90	122	308	149	149	769	124	175	727	73
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
PHF Volume:	134	219	93	126	318	154	154	793	128	180	749	75
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	134	219	93	126	318	154	154	793	128	180	749	75
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	134	219	93	126	318	154	154	793	128	180	749	75
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.89	0.89	0.93	0.91	0.91	0.93	0.92	0.92
Lanes:	1.00	1.40	0.60	1.00	1.35	0.65	1.00	1.72	0.28	1.00	1.82	0.18
Final Sat.:	1769	2372	1007	1769	2268	1097	1769	2983	481	1769	3170	318
Capacity Analysis Module:												
Vol/Sat:	0.08	0.09	0.09	0.07	0.14	0.14	0.09	0.27	0.27	0.10	0.24	0.24
Crit Moves:	****			****			****			****		
Green Time:	7.0	10.9	10.9	7.7	11.6	11.6	9.5	22.0	22.0	8.4	20.9	20.9
Volume/Cap:	0.70	0.55	0.55	0.60	0.79	0.79	0.59	0.79	0.79	0.79	0.74	0.74
Delay/Veh:	39.3	25.9	25.9	32.2	32.3	32.3	29.6	23.0	23.0	43.7	22.2	22.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.3	25.9	25.9	32.2	32.3	32.3	29.6	23.0	23.0	43.7	22.2	22.2
LOS by Move:	D	C	C	C	C	C	C	C	C	D	C	C
HCM2kAvgQ:	4	4	4	4	7	7	4	11	11	6	9	9

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 Thornton Ave. / Cedar Blvd.

Cycle (sec):	80	Critical Vol./Cap.(X):	0.917
Loss Time (sec):	16	Average Delay (sec/veh):	37.9
Optimal Cycle:	107	Level Of Service:	D

Street Name:	Cedar Blvd.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	2 0	2 0	1	1 0	1 1	0	1 0	2 0	1
Volume Module:4:45PM												
Base Vol:	89	283	246	375	247	30	162	762	66	297	670	232
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	89	283	246	375	247	30	162	762	66	297	670	232
Added Vol:	0	0	0	0	0	11	7	175	0	0	289	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	89	283	246	375	247	41	169	937	66	297	959	232
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	91	289	251	383	252	42	172	956	67	303	979	237
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	91	289	251	383	252	42	172	956	67	303	979	237
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	91	289	251	383	252	42	172	956	67	303	979	237
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.92	0.92	0.93	0.93	0.83
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.87	0.13	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	3272	230	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.05	0.08	0.16	0.11	0.07	0.03	0.10	0.29	0.29	0.17	0.28	0.15
Crit Moves:			****	****				****		****		
Green Time:	13.8	13.8	13.8	10.0	10.0	10.0	10.5	25.4	25.4	14.9	29.7	39.7
Volume/Cap:	0.30	0.47	0.92	0.89	0.57	0.21	0.74	0.92	0.92	0.92	0.74	0.30
Delay/Veh:	29.5	30.4	67.0	54.7	34.7	32.0	45.7	38.7	38.7	62.3	24.2	12.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.5	30.4	67.0	54.7	34.7	32.0	45.7	38.7	38.7	62.3	24.2	12.1
LOS by Move:	C	C	E	D	C	C	D	D	D	E	C	B
HCM2kAvgQ:	2	4	10	6	3	1	6	17	17	8	11	3

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2020 Analysis
Existing Plus Project PM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 Thornton Ave. / SB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.732
Loss Time (sec):	8	Average Delay (sec/veh):	13.4
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	SB 880 Ramps						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Ignore			Ignore			Ignore		
Min. Green:	0	0	0	10	0	10	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2	0	0 0 1	0	0	2 0 1	0	0	2 0 1
Volume Module: >> Count Date: 9 May 2007 << 5:00-6:00 pm												
Base Vol:	0	0	0	780	0	189	0	1172	211	0	1027	281
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	780	0	189	0	1172	211	0	1027	281
Added Vol:	0	0	0	0	0	212	0	156	18	0	77	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	780	0	401	0	1328	229	0	1104	281
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	0	0	0	821	0	0	0	1398	0	0	1162	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	821	0	0	0	1398	0	0	1162	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	821	0	0	0	1398	0	0	1162	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3432	0	1900	0	3538	1900	0	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.40	0.00	0.00	0.33	0.00
Crit Moves:				****				****				
Green Time:	0.0	0.0	0.0	19.6	0.0	0.0	0.0	32.4	0.0	0.0	32.4	0.0
Volume/Cap:	0.00	0.00	0.00	0.73	0.00	0.00	0.00	0.73	0.00	0.00	0.61	0.00
Delay/Veh:	0.0	0.0	0.0	20.4	0.0	0.0	0.0	12.0	0.0	0.0	10.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	20.4	0.0	0.0	0.0	12.0	0.0	0.0	10.0	0.0
LOS by Move:	A	A	A	C	A	A	A	B	A	A	B	A
HCM2kAvgQ:	0	0	0	9	0	0	0	10	0	0	8	0

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Existing Plus Project PM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 Thornton Ave. / NB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.694
Loss Time (sec):	8	Average Delay (sec/veh):	10.2
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	NB 880 Ramps						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Ignore			Include		
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1! 0	1	0	0	0	0	0	2	0	1	0	0	3	0	0
Volume Module: >> Count Date: 10 May 2007 << 6:00-7:00 pm												
Base Vol:	356	0	337	0	0	0	0	1488	462	0	953	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	356	0	337	0	0	0	0	1488	462	0	953	0
Added Vol:	26	0	0	0	0	0	0	31	126	0	51	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	382	0	337	0	0	0	0	1519	588	0	1004	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.00	0.96	0.96	0.96
PHF Volume:	398	0	351	0	0	0	0	1582	0	0	1046	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	398	0	351	0	0	0	0	1582	0	0	1046	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	398	0	351	0	0	0	0	1582	0	0	1046	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	1.00	0.89	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.89	1.00
Lanes:	1.53	0.00	1.47	0.00	0.00	0.00	0.00	2.00	1.00	0.00	3.00	0.00
Final Sat.:	2583	0	2477	0	0	0	0	3538	1900	0	5083	0
Capacity Analysis Module:												
Vol/Sat:	0.15	0.00	0.14	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.21	0.00
Crit Moves:	****							****				
Green Time:	13.3	0.0	13.3	0.0	0.0	0.0	0.0	38.7	0.0	0.0	38.7	0.0
Volume/Cap:	0.69	0.00	0.64	0.00	0.00	0.00	0.00	0.69	0.00	0.00	0.32	0.00
Delay/Veh:	23.4	0.0	22.3	0.0	0.0	0.0	0.0	7.8	0.0	0.0	4.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	23.4	0.0	22.3	0.0	0.0	0.0	0.0	7.8	0.0	0.0	4.8	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	6	0	5	0	0	0	0	10	0	0	3	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 Enterprise Dr / Willow St

Average Delay (sec/veh): 376.4 Worst Case Level Of Service: F[2228.7]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0 1! 0	0		0	0 1! 0	0		0	1 0	1 0		0	1 1	0 1	
Volume Module:																
Base Vol:	0	120	0		130	130	0		0	0	0		0	0	130	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	120	0		130	130	0		0	0	0		0	0	130	
Added Vol:	142	127	42		127	168	327		192	17	91		21	8	64	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	142	247	42		257	298	327		192	17	91		21	8	194	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92		0.92	0.92	0.92	
PHF Volume:	154	268	46		279	324	355		209	18	99		23	9	211	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	154	268	46		279	324	355		209	18	99		23	9	211	
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx		4.1	xxxx	xxxxx		7.1	6.5	6.2		7.1	6.5	6.2	
FollowUpTim:	2.2	xxxx	xxxxx		2.2	xxxx	xxxxx		3.5	4.0	3.3		3.5	4.0	3.3	
Capacity Module:																
Cnflict Vol:	679	xxxx	xxxxx		314	xxxx	xxxxx		1770	1683	502		1719	1838	291	
Potent Cap.:	913	xxxx	xxxxx		1246	xxxx	xxxxx		65	94	570		71	76	748	
Move Cap.:	913	xxxx	xxxxx		1246	xxxx	xxxxx		28	56	570		31	45	748	
Volume/Cap:	0.17	xxxx	xxxx		0.22	xxxx	xxxx		7.55	0.33	0.17		0.75	0.19	0.28	
Level Of Service Module:																
2Way95thQ:	0.6	xxxx	xxxxx		0.9	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	0.3	1.2	
Control Del:	9.7	xxxx	xxxxx		8.7	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	92.8	11.7	
LOS by Move:	A	*	*		A	*	*		*	*	*		*	F	B	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		29	xxxx	234		32	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		27.9	xxxx	2.6		2.9	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		3362	xxxx	34.9		290.4	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		F	*	D		F	*	*	
ApproachDel:	xxxxxx				xxxxxx				2228.7				44.4			
ApproachLOS:	*				*				F				E			

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #15 Central Ave. / Cherry St.

Cycle (sec):	70	Critical Vol./Cap.(X):	0.849
Loss Time (sec):	16	Average Delay (sec/veh):	29.1
Optimal Cycle:	82	Level Of Service:	C

Street Name:	Cherry St.						Central Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 2	0	1	1 0	1	1 0	1 0	1	0 1	2 0	1	1 0
Volume Module: >> Count Date: 5 Oct 2006 << 4:45-5:45 pm												
Base Vol:	332	416	216	75	310	12	10	183	436	241	91	63
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	332	416	216	75	310	12	10	183	436	241	91	63
Added Vol:	271	0	0	0	0	8	5	23	161	0	36	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	603	416	216	75	310	20	15	206	597	241	127	63
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	641	443	230	80	330	21	16	219	635	256	135	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	641	443	230	80	330	21	16	219	635	256	135	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	641	443	230	80	330	21	16	219	635	256	135	67
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.92	0.92	0.93	0.98	0.83	0.90	0.88	0.88
Lanes:	1.00	2.00	1.00	1.00	1.88	0.12	1.00	1.00	1.00	2.00	1.34	0.66
Final Sat.:	1769	3538	1583	1769	3293	212	1769	1862	1583	3432	2247	1114
Capacity Analysis Module:												
Vol/Sat:	0.36	0.13	0.15	0.05	0.10	0.10	0.01	0.12	0.40	0.07	0.06	0.06
Crit Moves:	****				****			****		****		
Green Time:	27.0	21.8	28.8	15.2	10.0	17.0	7.0	10.0	37.0	7.0	10.0	10.0
Volume/Cap:	0.94	0.40	0.35	0.21	0.70	0.41	0.09	0.82	0.76	0.75	0.42	0.42
Delay/Veh:	41.8	19.2	14.5	22.7	33.0	22.6	28.8	47.6	17.1	39.4	28.0	28.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.8	19.2	14.5	22.7	33.0	22.6	28.8	47.6	17.1	39.4	28.0	28.0
LOS by Move:	D	B	B	C	C	C	C	D	B	D	C	C
HCM2kAvgQ:	19	4	4	2	5	4	0	7	13	5	3	3

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2020 Analysis
Existing Plus Project PM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Central Ave. / Cedar Blvd.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.610
Loss Time (sec):	16	Average Delay (sec/veh):	23.1
Optimal Cycle:	60	Level Of Service:	C

Street Name:	Cedar Blvd.						Central Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:4:45PM												
Base Vol:	36	328	147	145	273	43	83	378	46	101	232	138
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	36	328	147	145	273	43	83	378	46	101	232	138
Added Vol:	0	0	0	0	0	0	0	20	0	0	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	36	328	147	145	273	43	83	398	46	101	264	138
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	40	360	162	159	300	47	91	437	51	111	290	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	360	162	159	300	47	91	437	51	111	290	152
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	40	360	162	159	300	47	91	437	51	111	290	152
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.91	0.91	0.93	0.92	0.92	0.93	0.88	0.88
Lanes:	1.00	1.38	0.62	1.00	1.73	0.27	1.00	1.79	0.21	1.00	1.31	0.69
Final Sat.:	1769	2331	1044	1769	2995	472	1769	3121	361	1769	2205	1153
Capacity Analysis Module:												
Vol/Sat:	0.02	0.15	0.15	0.09	0.10	0.10	0.05	0.14	0.14	0.06	0.13	0.13
Crit Moves:		****		****				****		****		
Green Time:	9.7	14.9	14.9	8.7	13.8	13.8	8.4	13.5	13.5	7.0	12.0	12.0
Volume/Cap:	0.14	0.62	0.62	0.62	0.43	0.43	0.37	0.62	0.62	0.54	0.66	0.66
Delay/Veh:	21.8	21.6	21.6	28.9	20.1	20.1	24.3	22.6	22.6	27.8	24.4	24.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.8	21.6	21.6	28.9	20.1	20.1	24.3	22.6	22.6	27.8	24.4	24.4
LOS by Move:	C	C	C	C	C	C	C	C	C	C	C	C
HCM2kAvgQ:	1	6	6	4	3	3	2	5	5	3	5	5

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2020 Analysis
Existing Plus Project PM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Mowry Ave. / Cherry St.

Cycle (sec):	80	Critical Vol./Cap.(X):	0.892
Loss Time (sec):	16	Average Delay (sec/veh):	37.1
Optimal Cycle:	99	Level Of Service:	D

Street Name:	Cherry St.						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	2 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module: >> Count Date: 3 Oct 2006 << 4:45-5:45 pm												
Base Vol:	41	798	152	387	635	63	76	176	53	68	128	322
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	41	798	152	387	635	63	76	176	53	68	128	322
Added Vol:	0	20	0	147	12	0	0	0	0	0	0	249
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	41	818	152	534	647	63	76	176	53	68	128	571
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	46	919	171	600	727	71	85	198	60	76	144	642
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	919	171	600	727	71	85	198	60	76	144	642
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	919	171	600	727	71	85	198	60	76	144	642
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	1862	1583	1769	1862	1583
Capacity Analysis Module:												
Vol/Sat:	0.03	0.26	0.11	0.17	0.21	0.04	0.05	0.11	0.04	0.04	0.08	0.41
Crit Moves:		****		****			****					****
Green Time:	11.1	22.3	22.3	15.0	26.1	26.1	7.0	15.7	26.9	11.0	19.8	34.7
Volume/Cap:	0.19	0.93	0.39	0.93	0.63	0.14	0.55	0.54	0.11	0.31	0.31	0.93
Delay/Veh:	30.8	43.4	23.9	52.8	24.0	19.1	39.2	30.5	18.4	31.8	25.0	41.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.8	43.4	23.9	52.8	24.0	19.1	39.2	30.5	18.4	31.8	25.0	41.3
LOS by Move:	C	D	C	D	C	B	D	C	B	C	C	D
HCM2kAvgQ:	1	16	4	12	9	1	3	5	1	2	3	20

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2020 Analysis
Existing Plus Project PM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Mowry Ave. / SB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.622
Loss Time (sec):	8	Average Delay (sec/veh):	13.2
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	SB 880 Ramps						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Ignore			Ovl			Ignore			Ignore		
Min. Green:	0	0	0	10	0	10	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2	0 0	0 2	0 0	3	0 1	0 0	3	0 1
Volume Module:4:45PM												
Base Vol:	0	0	0	847	0	537	0	1316	414	0	885	527
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	847	0	537	0	1316	414	0	885	527
Added Vol:	0	0	0	2	0	0	0	29	112	0	240	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	849	0	537	0	1345	526	0	1125	527
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.95	0.95	0.00	0.95	0.95	0.95	0.95	0.95	0.00	0.95	0.95	0.00
PHF Volume:	0	0	0	894	0	565	0	1416	0	0	1184	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	894	0	565	0	1416	0	0	1184	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	894	0	565	0	1416	0	0	1184	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.73	1.00	0.89	1.00	1.00	0.89	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3432	0	2786	0	5083	1900	0	5083	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.26	0.00	0.20	0.00	0.28	0.00	0.00	0.23	0.00
Crit Moves:				****				****				
Green Time:	0.0	0.0	0.0	25.1	0.0	25.1	0.0	26.9	0.0	0.0	26.9	0.0
Volume/Cap:	0.00	0.00	0.00	0.62	0.00	0.48	0.00	0.62	0.00	0.00	0.52	0.00
Delay/Veh:	0.0	0.0	0.0	14.6	0.0	13.0	0.0	13.2	0.0	0.0	12.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	14.6	0.0	13.0	0.0	13.2	0.0	0.0	12.1	0.0
LOS by Move:	A	A	A	B	A	B	A	B	A	A	B	A
HCM2kAvgQ:	0	0	0	8	0	5	0	8	0	0	6	0

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2020 Analysis
Existing Plus Project PM Conditions

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Mowry Ave. / NB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.832
Loss Time (sec):	8	Average Delay (sec/veh):	16.0
Optimal Cycle:	62	Level Of Service:	B

Street Name:	NB 880 Ramps						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Ovl			Ignore			Ignore			Ignore		
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0 0	0	2	0 0	0	0 0	0 0	3	0 1	0 0	4	0 1
Volume Module:4:30PM												
Base Vol:	255	0	951	0	0	0	0	1753	408	0	1139	699
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	255	0	951	0	0	0	0	1753	408	0	1139	699
Added Vol:	190	0	0	0	0	0	0	31	0	0	50	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	445	0	951	0	0	0	0	1784	408	0	1189	700
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	0.96	0.96	0.96	0.96	0.96	0.00	0.96	0.96	0.00	0.96	0.96	0.00
PHF Volume:	464	0	991	0	0	0	0	1858	0	0	1239	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	464	0	991	0	0	0	0	1858	0	0	1239	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	464	0	991	0	0	0	0	1858	0	0	1239	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.73	1.00	1.00	1.00	1.00	0.89	1.00	1.00	0.89	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	0.00	4.00	1.00
Final Sat.:	3432	0	2786	0	0	0	0	5083	1900	0	6778	1900
Capacity Analysis Module:												
Vol/Sat:	0.14	0.00	0.36	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.18	0.00
Crit Moves:			****					****				
Green Time:	25.6	0.0	25.6	0.0	0.0	0.0	0.0	26.4	0.0	0.0	26.4	0.0
Volume/Cap:	0.32	0.00	0.83	0.00	0.00	0.00	0.00	0.83	0.00	0.00	0.42	0.00
Delay/Veh:	11.5	0.0	20.4	0.0	0.0	0.0	0.0	17.7	0.0	0.0	11.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.5	0.0	20.4	0.0	0.0	0.0	0.0	17.7	0.0	0.0	11.6	0.0
LOS by Move:	B	A	C	A	A	A	A	B	A	A	B	A
HCM2kAvgQ:	3	0	12	0	0	0	0	12	0	0	5	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Scenario Report

Scenario:	Cum With Pj_AM
Command:	Future _ WITH Project AM
Volume:	Cum_AM
Geometry:	Ex_AM
Impact Fee:	Default Impact Fee
Trip Generation:	Project AM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 84 WB Ramps / Thornton Ave.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.555
Loss Time (sec):	8	Average Delay (sec/veh):	14.4
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Thornton Ave.						84 WB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Ignore			Ignore			Include			Include		
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	0 0	2	0 1	0 0	0	0 0	1 0	0	0 1
Volume Module:7:45AM												
Base Vol:	0	550	870	0	490	910	0	0	0	520	0	80
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	550	870	0	490	910	0	0	0	520	0	80
Added Vol:	0	59	95	0	23	0	0	0	0	27	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	609	965	0	513	910	0	0	0	547	0	80
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	609	0	0	513	0	0	0	0	547	0	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	609	0	0	513	0	0	0	0	547	0	80
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	609	0	0	513	0	0	0	0	547	0	80
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	1.00	1.00	0.93	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1900	0	3538	1900	0	0	0	1769	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.17	0.00	0.00	0.15	0.00	0.00	0.00	0.00	0.31	0.00	0.05
Crit Moves:		****								****		
Green Time:	0.0	18.6	0.0	0.0	18.6	0.0	0.0	0.0	0.0	33.4	0.0	33.4
Volume/Cap:	0.00	0.56	0.00	0.00	0.47	0.00	0.00	0.00	0.00	0.56	0.00	0.09
Delay/Veh:	0.0	17.9	0.0	0.0	17.0	0.0	0.0	0.0	0.0	9.2	0.0	6.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	17.9	0.0	0.0	17.0	0.0	0.0	0.0	0.0	9.2	0.0	6.3
LOS by Move:	A	B	A	A	B	A	A	A	A	A	A	A
HCM2kAvgQ:	0	5	0	0	4	0	0	0	0	7	0	1

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

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2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 84 EB Ramps / Thornton Ave.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.650
Loss Time (sec):	8	Average Delay (sec/veh):	13.0
Optimal Cycle:	60	Level Of Service:	B

Street Name:	Thornton Ave.						84 EB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Ignore		
Min. Green:	0	10	10	0	10	10	10	10	10	0	0	0
Y+R:	0.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	0 0	2	0 1	1 0	0	1 0	0 0	0	0 0
Volume Module:7:30AM												
Base Vol:	0	980	150	0	690	340	430	0	340	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	980	150	0	690	340	430	0	340	0	0	0
Added Vol:	0	154	61	0	50	0	0	0	35	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1134	211	0	740	340	430	0	375	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	0	1134	211	0	740	0	430	0	375	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1134	211	0	740	0	430	0	375	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	0	1134	211	0	740	0	430	0	375	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	1.00	0.93	1.00	0.93	1.00	0.83	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3538	1583	0	3538	1900	1769	0	1583	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.32	0.13	0.00	0.21	0.00	0.24	0.00	0.24	0.00	0.00	0.00
Crit Moves:		****					****					
Green Time:	0.0	29.6	29.6	0.0	29.6	0.0	22.4	0.0	22.4	0.0	0.0	0.0
Volume/Cap:	0.00	0.65	0.27	0.00	0.42	0.00	0.65	0.00	0.63	0.00	0.00	0.00
Delay/Veh:	0.0	12.2	9.1	0.0	9.9	0.0	17.8	0.0	17.7	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	12.2	9.1	0.0	9.9	0.0	17.8	0.0	17.7	0.0	0.0	0.0
LOS by Move:	A	B	A	A	A	A	B	A	B	A	A	A
HCM2kAvgQ:	0	8	2	0	4	0	8	0	7	0	0	0

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Future Year 2035 Base Plus Project AM

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2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Gateway Blvd. / Thornton Ave.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.684
Loss Time (sec):	12	Average Delay (sec/veh):	15.9
Optimal Cycle:	60	Level Of Service:	B

Street Name:	Thornton Ave.						Gateway Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	2	0 1	0 0	0 0	0	0 0	1	0 0	0 2
Volume Module: >> Count Date: 17 May 2007 << 7:30-8:30 am												
Base Vol:	0	730	30	370	540	0	0	0	0	30	0	480
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	730	30	370	540	0	0	0	0	30	0	480
Added Vol:	0	215	5	0	84	0	0	0	0	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	945	35	370	624	0	0	0	0	31	0	480
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	945	35	370	624	0	0	0	0	31	0	480
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	945	35	370	624	0	0	0	0	31	0	480
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	945	35	370	624	0	0	0	0	31	0	480
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.73
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3538	1583	3432	1862	0	0	0	0	1769	0	2786
Capacity Analysis Module:												
Vol/Sat:	0.00	0.27	0.02	0.11	0.34	0.00	0.00	0.00	0.00	0.02	0.00	0.17
Crit Moves:		****		****								****
Green Time:	0.0	23.4	23.4	9.5	32.9	0.0	0.0	0.0	0.0	15.1	0.0	24.6
Volume/Cap:	0.00	0.68	0.06	0.68	0.61	0.00	0.00	0.00	0.00	0.07	0.00	0.42
Delay/Veh:	0.0	16.6	11.4	27.5	10.3	0.0	0.0	0.0	0.0	17.2	0.0	12.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	16.6	11.4	27.5	10.3	0.0	0.0	0.0	0.0	17.2	0.0	12.9
LOS by Move:	A	B	B	C	B	A	A	A	A	B	A	B
HCM2kAvgQ:	0	8	0	3	8	0	0	0	0	0	0	4

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2020 Analysis
Future Year 2035 Base Plus Project AM

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2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Jarvis Ave. / Newark Blvd.

Cycle (sec):	135	Critical Vol./Cap.(X):	1.105
Loss Time (sec):	16	Average Delay (sec/veh):	93.7
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Newark Blvd.						Jarvis Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	1 0		2 0 2	0 1		2 0 0	1 0		1 0 1	1 0	
Volume Module: >> Count Date: 24 May 2006 << 7:45-8:45 am												
Base Vol:	240	1530	30	320	990	610	810	110	110	80	110	310
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	240	1530	30	320	990	610	810	110	110	80	110	310
Added Vol:	4	9	9	0	3	0	0	0	3	3	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	244	1539	39	320	993	610	810	110	113	83	110	310
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	244	1539	39	320	993	610	810	110	113	83	110	310
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	244	1539	39	320	993	610	810	110	113	83	110	310
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	244	1539	39	320	993	610	810	110	113	83	110	310
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	0.90	0.93	0.83	0.90	0.91	0.91	0.93	0.83	0.83
Lanes:	1.00	1.95	0.05	2.00	2.00	1.00	2.00	0.49	0.51	1.00	1.00	1.00
Final Sat.:	1769	3437	87	3432	3538	1583	3432	849	872	1769	1573	1573
Capacity Analysis Module:												
Vol/Sat:	0.14	0.45	0.45	0.09	0.28	0.39	0.24	0.13	0.13	0.05	0.07	0.20
Crit Moves:		****		****			****					****
Green Time:	17.4	54.7	54.7	11.4	48.7	48.7	28.8	37.8	37.8	15.1	24.1	24.1
Volume/Cap:	1.07	1.11	1.11	1.11	0.78	1.07	1.11	0.46	0.46	0.42	0.39	1.11
Delay/Veh:	137.8	98.3	98.3	145.9	41.5	100.6	119.0	40.9	40.9	57.3	49.2	133.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	137.8	98.3	98.3	145.9	41.5	100.6	119.0	40.9	40.9	57.3	49.2	133.1
LOS by Move:	F	F	F	F	D	F	F	D	D	E	D	F
HCM2kAvgQ:	16	47	47	10	20	33	24	7	7	4	4	21

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Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Cedar Blvd. / Newark Blvd.

Cycle (sec):	120	Critical Vol./Cap.(X):	1.056
Loss Time (sec):	16	Average Delay (sec/veh):	71.1
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Newark Blvd.						Cedar Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:7:45AM												
Base Vol:	200	1120	70	230	980	40	110	260	120	100	230	590
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	200	1120	70	230	980	40	110	260	120	100	230	590
Added Vol:	0	33	0	0	12	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	200	1153	70	230	992	40	110	260	120	100	230	590
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	200	1153	70	230	992	40	110	260	120	100	230	590
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	1153	70	230	992	40	110	260	120	100	230	590
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	200	1153	70	230	992	40	110	260	120	100	230	590
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.92	0.92	0.93	0.93	0.93	0.93	0.89	0.89	0.93	0.83	0.83
Lanes:	1.00	1.89	0.11	1.00	1.92	0.08	1.00	1.37	0.63	1.00	1.00	1.00
Final Sat.:	1769	3305	201	1769	3380	136	1769	2307	1065	1769	1578	1578
Capacity Analysis Module:												
Vol/Sat:	0.11	0.35	0.35	0.13	0.29	0.29	0.06	0.11	0.11	0.06	0.15	0.37
Crit Moves:		****		****			****					****
Green Time:	15.1	39.7	39.7	14.8	39.3	39.3	7.1	32.7	32.7	16.9	42.5	42.5
Volume/Cap:	0.90	1.06	1.06	1.06	0.90	0.90	1.06	0.41	0.41	0.40	0.41	1.06
Delay/Veh:	85.4	82.6	82.6	129.0	47.8	47.8	160.5	36.1	36.1	48.0	29.4	86.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	85.4	82.6	82.6	129.0	47.8	47.8	160.5	36.1	36.1	48.0	29.4	86.8
LOS by Move:	F	F	F	F	D	D	F	D	D	D	C	F
HCM2kAvgQ:	10	33	33	14	22	22	8	6	6	3	7	30

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Cedar Blvd. / Lake Blvd.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.539
Loss Time (sec):	12	Average Delay (sec/veh):	15.9
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Cedar Blvd.						Lake Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ignore			Ignore			Include		
Min. Green:	7	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 0	0 0	0	0 0	1 0	0	0 1
Volume Module:7:45AM												
Base Vol:	20	810	100	30	480	0	0	0	0	260	0	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	810	100	30	480	0	0	0	0	260	0	20
Added Vol:	0	0	10	0	0	0	0	0	0	4	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	810	110	30	480	0	0	0	0	264	0	20
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	20	810	110	30	480	0	0	0	0	264	0	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	810	110	30	480	0	0	0	0	264	0	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	20	810	110	30	480	0	0	0	0	264	0	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.93	0.93	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	1.00	1.76	0.24	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	1769	3059	415	1769	3538	0	0	0	0	1769	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.01	0.26	0.26	0.02	0.14	0.00	0.00	0.00	0.00	0.15	0.00	0.01
Crit Moves:		****		****						****		
Green Time:	13.7	26.2	26.2	7.0	19.5	0.0	0.0	0.0	0.0	14.8	0.0	14.8
Volume/Cap:	0.05	0.61	0.61	0.15	0.42	0.00	0.00	0.00	0.00	0.61	0.00	0.05
Delay/Veh:	18.1	13.6	13.6	24.1	16.0	0.0	0.0	0.0	0.0	22.5	0.0	17.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	18.1	13.6	13.6	24.1	16.0	0.0	0.0	0.0	0.0	22.5	0.0	17.3
LOS by Move:	B	B	B	C	B	A	A	A	A	C	A	B
HCM2kAvgQ:	0	7	7	0	3	0	0	0	0	5	0	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Thornton Ave. / Willow St.

Cycle (sec):	85	Critical Vol./Cap.(X):	0.726
Loss Time (sec):	16	Average Delay (sec/veh):	35.7
Optimal Cycle:	69	Level Of Service:	D

Street Name:	Willow St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0	0 1 0	1	0	1 1 0	1	0	0 1 0
Volume Module: >> Count Date: 17 May 2007 << 7:30-8:30 am												
Base Vol:	190	30	10	30	40	30	10	410	260	20	560	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	190	30	10	30	40	30	10	410	260	20	560	20
Added Vol:	219	1	353	0	2	0	0	0	86	132	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	409	31	363	30	42	30	10	410	346	152	560	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	409	31	363	30	42	30	10	410	346	152	560	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	409	31	363	30	42	30	10	410	346	152	560	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	409	31	363	30	42	30	10	410	346	152	560	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.83	0.93	0.92	0.92	0.93	0.87	0.87	0.93	0.98	0.98
Lanes:	1.86	0.14	1.00	1.00	0.58	0.42	1.00	1.08	0.92	1.00	0.97	0.03
Final Sat.:	3309	251	1583	1769	1018	727	1769	1786	1507	1769	1789	64
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.23	0.02	0.04	0.04	0.01	0.23	0.23	0.09	0.31	0.31
Crit Moves:			****		****		****				****	
Green Time:	22.0	22.0	22.0	10.0	10.0	10.0	7.0	26.9	26.9	10.1	30.0	30.0
Volume/Cap:	0.48	0.48	0.89	0.14	0.35	0.35	0.07	0.72	0.72	0.72	0.89	0.89
Delay/Veh:	27.0	27.0	50.5	34.0	35.6	35.6	36.2	28.3	28.3	47.9	39.7	39.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.0	27.0	50.5	34.0	35.6	35.6	36.2	28.3	28.3	47.9	39.7	39.7
LOS by Move:	C	C	D	C	D	D	D	C	C	D	D	D
HCM2kAvgQ:	5	5	13	1	2	2	0	9	9	6	18	18

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Thornton Ave. / Spruce St.

Cycle (sec):	85	Critical Vol./Cap.(X):	0.788
Loss Time (sec):	8	Average Delay (sec/veh):	20.8
Optimal Cycle:	60	Level Of Service:	C

Street Name:	Spruce St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1! 0	1	0	0 1	1	0	0 1
Volume Module:7:30AM												
Base Vol:	20	60	30	120	70	40	20	620	20	20	540	120
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	60	30	120	70	40	20	620	20	20	540	120
Added Vol:	0	0	0	0	0	6	12	322	0	0	120	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	60	30	120	70	46	32	942	20	20	660	120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	60	30	120	70	46	32	942	20	20	660	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	60	30	120	70	46	32	942	20	20	660	120
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	60	30	120	70	46	32	942	20	20	660	120
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.94	0.93	0.93	0.93	0.21	0.98	0.98	0.11	0.96	0.96
Lanes:	0.18	0.55	0.27	0.51	0.30	0.19	1.00	0.98	0.02	1.00	0.85	0.15
Final Sat.:	323	969	485	899	524	345	402	1818	39	212	1539	280
Capacity Analysis Module:												
Vol/Sat:	0.06	0.06	0.06	0.13	0.13	0.13	0.08	0.52	0.52	0.09	0.43	0.43
Crit Moves:		****		****				****				
Green Time:	11.1	10.0	10.0	13.7	12.6	12.6	53.3	53.3	53.3	53.3	53.3	53.3
Volume/Cap:	0.47	0.53	0.53	0.83	0.90	0.90	0.13	0.83	0.83	0.15	0.68	0.68
Delay/Veh:	35.8	37.7	37.7	52.2	66.3	66.3	6.7	17.3	17.3	7.1	12.1	12.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.8	37.7	37.7	52.2	66.3	66.3	6.7	17.3	17.3	7.1	12.1	12.1
LOS by Move:	D	D	D	D	E	E	A	B	B	A	B	B
HCM2kAvgQ:	3	3	3	9	10	10	0	22	22	0	14	14

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Thornton Ave. / Cherry St.

Cycle (sec):	65	Critical Vol./Cap.(X):	0.873
Loss Time (sec):	16	Average Delay (sec/veh):	32.0
Optimal Cycle:	83	Level Of Service:	C

Street Name:	Cherry St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Ovl			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	0 1	0	0 1	1	0 1	1 0	1	0 1	1 0
Volume Module: >> Count Date: 27 Sep 2006 << 7:30-8:30 am												
Base Vol:	290	200	130	50	230	30	50	350	260	170	370	40
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	290	200	130	50	230	30	50	350	260	170	370	40
Added Vol:	9	0	0	0	0	0	0	309	4	0	114	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	299	200	130	50	230	30	50	659	264	170	484	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	299	200	130	50	230	30	50	659	264	170	484	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	299	200	130	50	230	30	50	659	264	170	484	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	299	200	130	50	230	30	50	659	264	170	484	40
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.97	0.97	0.83	0.93	0.89	0.89	0.93	0.92	0.92
Lanes:	1.20	0.80	1.00	0.18	0.82	1.00	1.00	1.43	0.57	1.00	1.85	0.15
Final Sat.:	2167	1449	1583	330	1516	1583	1769	2417	968	1769	3232	267
Capacity Analysis Module:												
Vol/Sat:	0.14	0.14	0.08	0.15	0.15	0.02	0.03	0.27	0.27	0.10	0.15	0.15
Crit Moves:		****			****			****		****		
Green Time:	10.3	10.3	17.4	11.3	11.3	11.3	11.3	20.3	30.6	7.2	16.1	16.1
Volume/Cap:	0.87	0.87	0.31	0.87	0.87	0.11	0.16	0.87	0.58	0.87	0.60	0.60
Delay/Veh:	40.7	40.7	19.4	48.4	48.4	22.8	23.1	29.3	13.1	60.9	22.8	22.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.7	40.7	19.4	48.4	48.4	22.8	23.1	29.3	13.1	60.9	22.8	22.8
LOS by Move:	D	D	B	D	D	C	C	C	B	E	C	C
HCM2kAvgQ:	8	8	2	9	9	1	1	13	8	6	6	6

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2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Thornton Ave. / Newark Blvd.

Cycle (sec):	95	Critical Vol./Cap.(X):	0.940
Loss Time (sec):	16	Average Delay (sec/veh):	46.9
Optimal Cycle:	130	Level Of Service:	D

Street Name:	Newark Blvd.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	1	0	1 0 1	1	0	1 0 1	1	0	1 0 1	1	0
Volume Module:7:45AM												
Base Vol:	290	1220	60	130	1010	40	60	520	80	110	450	80
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	290	1220	60	130	1010	40	60	520	80	110	450	80
Added Vol:	0	4	0	0	2	12	30	280	0	0	102	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	290	1224	60	130	1012	52	90	800	80	110	552	80
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	290	1224	60	130	1012	52	90	800	80	110	552	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	290	1224	60	130	1012	52	90	800	80	110	552	80
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	290	1224	60	130	1012	52	90	800	80	110	552	80
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.92	0.92	0.93	0.92	0.92	0.93	0.92	0.92	0.93	0.91	0.91
Lanes:	1.00	1.91	0.09	1.00	1.90	0.10	1.00	1.82	0.18	1.00	1.75	0.25
Final Sat.:	1769	3349	164	1769	3341	172	1769	3171	317	1769	3031	439
Capacity Analysis Module:												
Vol/Sat:	0.16	0.37	0.37	0.07	0.30	0.30	0.05	0.25	0.25	0.06	0.18	0.18
Crit Moves:	****				****			****			****	
Green Time:	16.4	38.9	38.9	7.8	30.3	30.3	9.3	25.3	25.3	7.0	23.0	23.0
Volume/Cap:	0.95	0.89	0.89	0.89	0.95	0.95	0.52	0.95	0.95	0.84	0.75	0.75
Delay/Veh:	76.8	33.6	33.6	86.9	47.7	47.7	43.5	52.6	52.6	80.2	37.3	37.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	76.8	33.6	33.6	86.9	47.7	47.7	43.5	52.6	52.6	80.2	37.3	37.3
LOS by Move:	E	C	C	F	D	D	D	D	D	F	D	D
HCM2kAvgQ:	13	22	22	7	21	21	3	18	18	6	11	11

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 Thornton Ave. / Cedar Blvd.

Cycle (sec):	125	Critical Vol./Cap.(X):	1.167
Loss Time (sec):	16	Average Delay (sec/veh):	93.9
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Cedar Blvd.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	2 0	2 0	1	1 0	1 1	0	1 0	2 0	1
Volume Module:7:30Am												
Base Vol:	100	350	290	610	560	50	100	720	80	620	620	670
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	100	350	290	610	560	50	100	720	80	620	620	670
Added Vol:	0	0	0	0	0	4	10	270	0	0	98	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	100	350	290	610	560	54	110	990	80	620	718	670
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	100	350	290	610	560	54	110	990	80	620	718	670
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	350	290	610	560	54	110	990	80	620	718	670
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	100	350	290	610	560	54	110	990	80	620	718	670
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.92	0.92	0.93	0.93	0.83
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.85	0.15	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	3237	262	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.06	0.10	0.18	0.18	0.16	0.03	0.06	0.31	0.31	0.35	0.20	0.42
Crit Moves:			****	****				****		****		
Green Time:	19.6	19.6	19.6	19.0	19.0	19.0	14.2	32.8	32.8	37.6	56.1	75.2
Volume/Cap:	0.36	0.63	1.17	1.17	1.04	0.22	0.55	1.17	1.17	1.17	0.45	0.70
Delay/Veh:	47.9	51.6	162.3	147.2	102	47.0	55.5	133	133.0	137.6	24.0	19.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.9	51.6	162.3	147.2	102	47.0	55.5	133	133.0	137.6	24.0	19.6
LOS by Move:	D	D	F	F	F	D	E	F	F	F	C	B
HCM2kAvgQ:	4	8	19	18	15	2	5	34	34	35	9	17

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 Thornton Ave. / SB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.786
Loss Time (sec):	8	Average Delay (sec/veh):	14.0
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	SB 880 Ramps						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Ignore			Ignore			Ignore		
Min. Green:	0	0	0	10	0	10	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2	0	0 0 1	0	0	2 0 1	0	0	2 0 1
Volume Module: >> Count Date: 9 May 2007 << 7:45-8:45 am												
Base Vol:	0	0	0	810	0	660	0	1330	400	0	1400	520
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	810	0	660	0	1330	400	0	1400	520
Added Vol:	0	0	0	0	0	68	0	245	25	0	30	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	810	0	728	0	1575	425	0	1430	520
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	810	0	0	0	1575	0	0	1430	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	810	0	0	0	1575	0	0	1430	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	810	0	0	0	1575	0	0	1430	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3432	0	1900	0	3538	1900	0	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.45	0.00	0.00	0.40	0.00
Crit Moves:				****				****				
Green Time:	0.0	0.0	0.0	18.0	0.0	0.0	0.0	34.0	0.0	0.0	34.0	0.0
Volume/Cap:	0.00	0.00	0.00	0.79	0.00	0.00	0.00	0.79	0.00	0.00	0.71	0.00
Delay/Veh:	0.0	0.0	0.0	23.3	0.0	0.0	0.0	12.3	0.0	0.0	10.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	23.3	0.0	0.0	0.0	12.3	0.0	0.0	10.7	0.0
LOS by Move:	A	A	A	C	A	A	A	B	A	A	B	A
HCM2kAvgQ:	0	0	0	9	0	0	0	11	0	0	10	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 Thornton Ave. / NB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.699
Loss Time (sec):	8	Average Delay (sec/veh):	8.4
Optimal Cycle:	OPTIMIZED	Level Of Service:	A

Street Name:	NB 880 Ramps						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Ignore			Include		
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1! 0	1	0	0	0	0	0	0	2	0 1	0	0	3	0	0
Volume Module: >> Count Date: 10 May 2007 << 7:15-8:15 am												
Base Vol:	320	0	260	0	0	0	0	1650	500	0	1600	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	320	0	260	0	0	0	0	1650	500	0	1600	0
Added Vol:	13	0	0	0	0	0	0	48	197	0	17	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	333	0	260	0	0	0	0	1698	697	0	1617	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	333	0	260	0	0	0	0	1698	0	0	1617	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	333	0	260	0	0	0	0	1698	0	0	1617	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	333	0	260	0	0	0	0	1698	0	0	1617	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.89	1.00	0.89	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.89	1.00
Lanes:	1.56	0.00	1.44	0.00	0.00	0.00	0.00	2.00	1.00	0.00	3.00	0.00
Final Sat.:	2642	0	2434	0	0	0	0	3538	1900	0	5083	0
Capacity Analysis Module:												
Vol/Sat:	0.13	0.00	0.11	0.00	0.00	0.00	0.00	0.48	0.00	0.00	0.32	0.00
Crit Moves:	****							****				
Green Time:	10.8	0.0	10.8	0.0	0.0	0.0	0.0	41.2	0.0	0.0	41.2	0.0
Volume/Cap:	0.70	0.00	0.59	0.00	0.00	0.00	0.00	0.70	0.00	0.00	0.46	0.00
Delay/Veh:	25.7	0.0	23.5	0.0	0.0	0.0	0.0	6.6	0.0	0.0	4.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.7	0.0	23.5	0.0	0.0	0.0	0.0	6.6	0.0	0.0	4.4	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	5	0	4	0	0	0	0	10	0	0	5	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 Enterprise Dr / Willow St

Average Delay (sec/veh): 225.2 Worst Case Level Of Service: F[898.7]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0 1! 0	0		0	0 1! 0	0		0	1 0	1 0		0	1 1	0 1	
Volume Module:																
Base Vol:	10	100	10		150	170	10		10	10	10		10	10	150	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	10	100	10		150	170	10		10	10	10		10	10	150	
Added Vol:	55	197	9		28	53	139		248	4	129		42	17	128	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	65	297	19		178	223	149		258	14	139		52	27	278	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	65	297	19		178	223	149		258	14	139		52	27	278	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	65	297	19		178	223	149		258	14	139		52	27	278	
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx		4.1	xxxx	xxxxx		7.1	6.5	6.2		7.1	6.5	6.2	
FollowUpTim:	2.2	xxxx	xxxxx		2.2	xxxx	xxxxx		3.5	4.0	3.3		3.5	4.0	3.3	
Capacity Module:																
Cnflict Vol:	372	xxxx	xxxxx		316	xxxx	xxxxx		1243	1100	298		1167	1165	307	
Potent Cap.:	1186	xxxx	xxxxx		1244	xxxx	xxxxx		151	212	742		171	194	733	
Move Cap.:	1186	xxxx	xxxxx		1244	xxxx	xxxxx		69	168	742		110	154	733	
Volume/Cap:	0.05	xxxx	xxxx		0.14	xxxx	xxxx		3.75	0.08	0.19		0.47	0.18	0.38	
Level Of Service Module:																
2Way95thQ:	0.2	xxxx	xxxxx		0.5	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	0.3	1.8	
Control Del:	8.2	xxxx	xxxxx		8.4	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	30.6	12.9	
LOS by Move:	A	*	*		A	*	*		*	*	*		*	D	B	
Movement:	LT	- LTR	- RT		LT	- LTR	- RT		LT	- LTR	- RT		LT	- LTR	- RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		71	xxxx	566		116	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		28.7	xxxx	1.1		2.7	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		1396	xxxx	13.7		69.8	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		F	*	B		F	*	*	
ApproachDel:	xxxxxx				xxxxxx				898.7				24.0			
ApproachLOS:	*				*				F				C			

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #15 Central Ave. / Cherry St.

Cycle (sec):	80	Critical Vol./Cap.(X):	0.959
Loss Time (sec):	16	Average Delay (sec/veh):	42.7
Optimal Cycle:	122	Level Of Service:	D

Street Name:	Cherry St.						Central Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 2	0	1	1 0 1	1	0	1 0 1	0	1	2 0 1	1	0
Volume Module: >> Count Date: 5 Oct 2006 << 7:15-8:15 am												
Base Vol:	500	520	160	180	560	30	10	110	530	360	210	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	500	520	160	180	560	30	10	110	530	360	210	60
Added Vol:	87	0	0	0	0	2	7	33	251	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	587	520	160	180	560	32	17	143	781	360	224	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	587	520	160	180	560	32	17	143	781	360	224	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	587	520	160	180	560	32	17	143	781	360	224	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	587	520	160	180	560	32	17	143	781	360	224	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.92	0.92	0.93	0.98	0.83	0.90	0.90	0.90
Lanes:	1.00	2.00	1.00	1.00	1.89	0.11	1.00	1.00	1.00	2.00	1.58	0.42
Final Sat.:	1769	3538	1583	1769	3320	190	1769	1862	1583	3432	2701	724
Capacity Analysis Module:												
Vol/Sat:	0.33	0.15	0.10	0.10	0.17	0.17	0.01	0.08	0.49	0.10	0.08	0.08
Crit Moves:	****				****				****	****		
Green Time:	27.7	24.7	33.4	17.1	14.1	23.2	9.2	13.5	41.2	8.8	13.1	13.1
Volume/Cap:	0.96	0.48	0.24	0.48	0.96	0.58	0.08	0.46	0.96	0.96	0.51	0.51
Delay/Veh:	52.0	22.8	15.3	28.5	58.9	25.1	31.9	31.0	40.6	71.1	31.3	31.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.0	22.8	15.3	28.5	58.9	25.1	31.9	31.0	40.6	71.1	31.3	31.3
LOS by Move:	D	C	B	C	E	C	C	C	D	E	C	C
HCM2kAvgQ:	20	6	3	4	12	7	0	4	25	8	4	4

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Central Ave. / Cedar Blvd.

Cycle (sec):	155	Critical Vol./Cap.(X):	1.296
Loss Time (sec):	16	Average Delay (sec/veh):	155.0
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Cedar Blvd.						Central Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	1 0		1 0 1	1 0		1 0 1	1 0		1 0 1	1 0	
Volume Module:7:30AN												
Base Vol:	220	360	130	390	820	80	80	850	330	750	1220	190
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	220	360	130	390	820	80	80	850	330	750	1220	190
Added Vol:	0	0	0	0	0	0	0	29	0	0	12	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	220	360	130	390	820	80	80	879	330	750	1232	190
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	220	360	130	390	820	80	80	879	330	750	1232	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	220	360	130	390	820	80	80	879	330	750	1232	190
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	220	360	130	390	820	80	80	879	330	750	1232	190
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.89	0.89	0.93	0.92	0.92	0.93	0.89	0.89	0.93	0.91	0.91
Lanes:	1.00	1.47	0.53	1.00	1.82	0.18	1.00	1.45	0.55	1.00	1.73	0.27
Final Sat.:	1769	2495	901	1769	3181	310	1769	2467	926	1769	3004	463
Capacity Analysis Module:												
Vol/Sat:	0.12	0.14	0.14	0.22	0.26	0.26	0.05	0.36	0.36	0.42	0.41	0.41
Crit Moves:	****			****			****			****		
Green Time:	14.9	18.1	18.1	27.6	30.8	30.8	9.3	42.6	42.6	50.7	84.0	84.0
Volume/Cap:	1.30	1.24	1.24	1.24	1.30	1.30	0.76	1.30	1.30	1.30	0.76	0.76
Delay/Veh:	239.8	195	195.2	194.8	206	205.9	98.1	197	197.5	197.9	29.3	29.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	239.8	195	195.2	194.8	206	205.9	98.1	197	197.5	197.9	29.3	29.3
LOS by Move:	F	F	F	F	F	F	F	F	F	F	C	C
HCM2kAvgQ:	19	21	21	30	37	37	5	49	49	57	28	28

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2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Mowry Ave. / Cherry St.

Cycle (sec):	160	Critical Vol./Cap.(X):	1.054
Loss Time (sec):	16	Average Delay (sec/veh):	83.7
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Cherry St.						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	2 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module: >> Count Date: 3 Oct 2006 << 7:15-8:15 am												
Base Vol:	60	1170	430	140	900	120	30	40	20	860	250	590
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	60	1170	430	140	900	120	30	40	20	860	250	590
Added Vol:	0	6	0	231	19	0	0	0	0	0	0	79
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	60	1176	430	371	919	120	30	40	20	860	250	669
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	60	1176	430	371	919	120	30	40	20	860	250	669
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	1176	430	371	919	120	30	40	20	860	250	669
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	60	1176	430	371	919	120	30	40	20	860	250	669
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	1862	1583	1769	1862	1583
Capacity Analysis Module:												
Vol/Sat:	0.03	0.33	0.27	0.11	0.26	0.08	0.02	0.02	0.01	0.49	0.13	0.42
Crit Moves:		****		****				****		****		
Green Time:	9.2	48.1	48.1	15.6	54.5	54.5	9.8	10.0	19.2	70.3	70.5	86.1
Volume/Cap:	0.59	1.11	0.90	1.11	0.76	0.22	0.28	0.34	0.11	1.11	0.30	0.79
Delay/Veh:	82.5	118	74.3	153.1	49.9	37.8	73.1	73.6	63.0	110.4	29.1	34.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	82.5	118	74.3	153.1	49.9	37.8	73.1	73.6	63.0	110.4	29.1	34.4
LOS by Move:	F	F	E	F	D	D	E	E	E	F	C	C
HCM2kAvgQ:	4	41	23	15	22	4	2	2	1	55	8	27

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2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Mowry Ave. / SB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.698
Loss Time (sec):	8	Average Delay (sec/veh):	11.8
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	SB 880 Ramps						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Ignore			Ovl			Ignore			Ignore		
Min. Green:	0	0	0	10	0	10	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2 0	0 0	2	0 0	3 0	1	0 0	3 0	1
Volume Module:8:00AM												
Base Vol:	0	0	0	680	0	400	0	770	600	0	1990	1210
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	680	0	400	0	770	600	0	1990	1210
Added Vol:	0	0	0	1	0	0	0	47	176	0	76	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	681	0	400	0	817	776	0	2066	1210
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	681	0	400	0	817	0	0	2066	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	681	0	400	0	817	0	0	2066	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	681	0	400	0	817	0	0	2066	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.73	1.00	0.89	1.00	1.00	0.89	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3432	0	2786	0	5083	1900	0	5083	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.14	0.00	0.16	0.00	0.00	0.41	0.00
Crit Moves:				****							****	
Green Time:	0.0	0.0	0.0	17.1	0.0	17.1	0.0	34.9	0.0	0.0	34.9	0.0
Volume/Cap:	0.00	0.00	0.00	0.70	0.00	0.51	0.00	0.28	0.00	0.00	0.70	0.00
Delay/Veh:	0.0	0.0	0.0	21.4	0.0	18.5	0.0	6.3	0.0	0.0	9.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	21.4	0.0	18.5	0.0	6.3	0.0	0.0	9.6	0.0
LOS by Move:	A	A	A	C	A	B	A	A	A	A	A	A
HCM2kAvgQ:	0	0	0	7	0	4	0	3	0	0	10	0

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2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Mowry Ave. / NB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.666
Loss Time (sec):	8	Average Delay (sec/veh):	10.9
Optimal Cycle:	60	Level Of Service:	B

Street Name:	NB 880 Ramps						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Ovl			Ignore			Ignore			Ignore		
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0	0 2	0	0	0 0	0	0 3	0 1	0	0 4	0 1
Volume Module:7:45AM												
Base Vol:	590	0	410	0	0	0	0	1110	270	0	2610	810
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	590	0	410	0	0	0	0	1110	270	0	2610	810
Added Vol:	61	0	0	0	0	0	0	48	0	0	16	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	651	0	410	0	0	0	0	1158	270	0	2626	812
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	651	0	410	0	0	0	0	1158	0	0	2626	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	651	0	410	0	0	0	0	1158	0	0	2626	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	651	0	410	0	0	0	0	1158	0	0	2626	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.73	1.00	1.00	1.00	1.00	0.89	1.00	1.00	0.89	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	0.00	4.00	1.00
Final Sat.:	3432	0	2786	0	0	0	0	5083	1900	0	6778	1900
Capacity Analysis Module:												
Vol/Sat:	0.19	0.00	0.15	0.00	0.00	0.00	0.00	0.23	0.00	0.00	0.39	0.00
Crit Moves:	****										****	
Green Time:	17.1	0.0	17.1	0.0	0.0	0.0	0.0	34.9	0.0	0.0	34.9	0.0
Volume/Cap:	0.67	0.00	0.52	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.67	0.00
Delay/Veh:	20.7	0.0	18.6	0.0	0.0	0.0	0.0	6.9	0.0	0.0	9.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	20.7	0.0	18.6	0.0	0.0	0.0	0.0	6.9	0.0	0.0	9.0	0.0
LOS by Move:	C	A	B	A	A	A	A	A	A	A	A	A
HCM2kAvgQ:	7	0	4	0	0	0	0	4	0	0	10	0

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2020 Analysis
Future Year 2035 Base Plus Project AM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Scenario Report

Scenario:	Cum With Pj_PM
Command:	Future _ WITH Project PM
Volume:	Cum_PM
Geometry:	C+P_PM
Impact Fee:	Default Impact Fee
Trip Generation:	Project PM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Trip Generation Report

Forecast for Project_PM

Zone #	Subzone	Amount	Units	Rate In	Rate Out	Trips In	Trips Out	Total Trips	% Of Total
1	Retail	1.00	Retail	57.00	57.00	57	57	114	6.5
	Zone 1 Subtotal					57	57	114	6.5
2	Residential	1.00	Residential	786.00	457.00	786	457	1243	70.8
	Zone 2 Subtotal					786	457	1243	70.8
3	Office	1.00	Office	53.00	67.00	53	67	120	6.8
	Zone 3 Subtotal					53	67	120	6.8
4	Residential	1.00	Residential -	185.00	93.00	185	93	278	15.8
	Zone 4 Subtotal					185	93	278	15.8
TOTAL						1081	674	1755	100.0

Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Turning Movement Report
Project_PM

Volume	Northbound			Southbound			Eastbound			Westbound			Total
Type	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
#1 84 WB Ramps / Thornton Ave.													
Base	0	1370	330	0	400	340	0	0	0	310	0	230	2980
Added	0	40	62	0	64	0	0	0	0	66	0	0	232
Total	0	1410	392	0	464	340	0	0	0	376	0	230	3212
#2 84 EB Ramps / Thornton Ave.													
Base	0	860	140	0	560	110	840	0	920	0	0	0	3430
Added	0	101	43	0	130	0	0	0	102	0	0	0	376
Total	0	961	183	0	690	110	840	0	1022	0	0	0	3806
#3 Gateway Blvd. / Thornton Ave.													
Base	0	550	60	420	1070	0	0	0	0	40	0	450	2590
Added	0	144	3	0	232	0	0	0	0	5	0	0	384
Total	0	694	63	420	1302	0	0	0	0	45	0	450	2974
#4 Jarvis Ave. / Newark Blvd.													
Base	170	1180	70	690	1160	690	690	180	180	180	190	240	5620
Added	4	6	6	0	10	0	0	0	5	10	0	0	41
Total	174	1186	76	690	1170	690	690	180	185	190	190	240	5661
#5 Cedar Blvd. / Newark Blvd.													
Base	150	940	30	550	1500	120	130	300	240	90	300	450	4800
Added	0	21	0	0	35	0	0	0	0	0	0	0	56
Total	150	961	30	550	1535	120	130	300	240	90	300	450	4856
#6 Cedar Blvd. / Lake Blvd.													
Base	20	720	180	80	730	0	0	0	0	250	0	10	1990
Added	0	0	7	0	0	0	0	0	0	11	0	0	18
Total	20	720	187	80	730	0	0	0	0	261	0	10	2008
#7 Thornton Ave. / Willow St.													
Base	120	10	130	20	10	10	50	830	260	20	560	30	2050
Added	147	3	233	0	3	0	0	0	237	381	0	0	1004
Total	267	13	363	20	13	10	50	830	497	401	560	30	3054
#8 Thornton Ave. / Spruce St.													
Base	20	20	30	60	30	20	20	890	20	40	620	60	1830
Added	0	0	0	0	0	14	9	212	0	0	347	0	582
Total	20	20	30	60	30	34	29	1102	20	40	967	60	2412
#9 Thornton Ave. / Cherry St.													
Base	450	200	190	60	270	30	60	480	490	200	390	60	2880
Added	7	0	0	0	0	0	0	202	11	0	332	0	552
Total	457	200	190	60	270	30	60	682	501	200	722	60	3432

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Volume Type	Northbound Left	Thru	Right	Southbound Left	Thru	Right	Eastbound Left	Thru	Right	Westbound Left	Thru	Right	Total Volume
#10 Thornton Ave. / Newark Blvd.													
Base	190	920	150	130	1180	130	150	750	240	190	440	80	4550
Added	0	3	0	0	4	32	20	181	0	0	300	0	540
Total	190	923	150	130	1184	162	170	931	240	190	740	80	5090
#11 Thornton Ave. / Cedar Blvd.													
Base	130	530	590	580	440	40	170	680	100	630	710	320	4920
Added	0	0	0	0	0	11	7	175	0	0	289	0	482
Total	130	530	590	580	440	51	177	855	100	630	999	320	5402
#12 Thornton Ave. / SB 880 Ramps													
Base	0	0	0	1040	0	370	0	1540	250	0	1320	380	4900
Added	0	0	0	0	0	212	0	156	18	0	77	0	463
Total	0	0	0	1040	0	582	0	1696	268	0	1397	380	5363
#13 Thornton Ave. / NB 880 Ramps													
Base	640	0	340	0	0	0	0	1770	810	0	1060	0	4620
Added	26	0	0	0	0	0	0	31	126	0	51	0	234
Total	666	0	340	0	0	0	0	1801	936	0	1111	0	4854
#14 Enterprise Dr / Willow St													
Base	10	130	10	140	140	10	10	10	10	10	10	140	630
Added	142	127	42	127	168	327	192	17	91	21	8	64	1326
Total	152	257	52	267	308	337	202	27	101	31	18	204	1956
#15 Central Ave. / Cherry St.													
Base	340	700	230	110	760	20	20	210	460	360	100	90	3400
Added	271	0	0	0	0	8	5	23	161	0	36	0	504
Total	611	700	230	110	760	28	25	233	621	360	136	90	3904
#16 Central Ave. / Cedar Blvd.													
Base	490	840	540	530	480	50	90	1320	100	220	680	290	5630
Added	0	0	0	0	0	0	0	20	0	0	32	0	52
Total	490	840	540	530	480	50	90	1340	100	220	712	290	5682
#17 Mowry Ave. / Cherry St.													
Base	50	850	710	730	920	90	100	220	60	230	170	940	5070
Added	0	20	0	147	12	0	0	0	0	0	0	249	428
Total	50	870	710	877	932	90	100	220	60	230	170	1189	5498
#18 Mowry Ave. / SB 880 Ramps													
Base	0	0	0	830	0	650	0	2210	630	0	1230	560	6110
Added	0	0	0	2	0	0	0	29	112	0	240	0	383
Total	0	0	0	832	0	650	0	2239	742	0	1470	560	6493

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Volume Type	Northbound Left	Thru	Right	Southbound Left	Thru	Right	Eastbound Left	Thru	Right	Westbound Left	Thru	Right	Total Volume
#19 Mowry Ave. / NB 880 Ramps													
Base	450	0	1140	0	0	0	0	2550	460	0	1270	720	6590
Added	190	0	0	0	0	0	0	31	0	0	50	1	272
Total	640	0	1140	0	0	0	0	2581	460	0	1320	721	6862
#33 84 WB Ramps / Newark Blvd.													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	6	0	0	10	0	0	0	0	0	0	0	16
Total	0	6	0	0	10	0	0	0	0	0	0	0	16
#34 84 EB Ramps / Newark Blvd.													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	6	0	0	10	0	0	0	0	0	0	0	16
Total	0	6	0	0	10	0	0	0	0	0	0	0	16
#101 Commerce Dr. / Thornton Ave.													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	40	0	0	64	0	0	0	0	0	0	0	104
Total	0	40	0	0	64	0	0	0	0	0	0	0	104
#102 Kaiser Dr. / Thornton Ave.													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	40	0	0	64	0	0	0	0	0	0	0	104
Total	0	40	0	0	64	0	0	0	0	0	0	0	104
#103 Dumbarton Cir. / Thornton Ave.													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	40	0	0	64	0	0	0	0	0	0	0	104
Total	0	40	0	0	64	0	0	0	0	0	0	0	104
#106 Decoto Rd. / SB 880 Ramps													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	0	0	7	0	43	0	0	60	60	170
Total	0	0	0	0	0	7	0	43	0	0	60	60	170
#107 Decoto Rd. / NB 880 Ramps													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	35	0	0	0	0	35	8	0	119	0	197
Total	0	0	35	0	0	0	0	35	8	0	119	0	197
#118 Thornton Ave. / Blacow Rd.- NB 880 On-Ramp													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	0	0	0	0	31	0	0	51	0	82
Total	0	0	0	0	0	0	0	31	0	0	51	0	82

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Volume Type	Northbound Left	Thru	Right	Southbound Left	Thru	Right	Eastbound Left	Thru	Right	Westbound Left	Thru	Right	Total Volume
#1114 Gateway Blvd. / Jarvis Ave.													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	3	0	0	5	5	3	0	0	0	0	0	16
Total	0	3	0	0	5	5	3	0	0	0	0	0	16
#1115 Jarvis Ave. / Spruce St.													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	3	0	3	0	0	0	0	0	5	6	0	0	17
Total	3	0	3	0	0	0	0	0	5	6	0	0	17
#1123													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	5	0	6	3	0	0	0	0	4	18
Total	0	0	0	5	0	6	3	0	0	0	0	4	18
#1129 Central Ave / Willow St													
Base	0	0	0	0	0	0	0	0	0	0	0	0	0
Added	0	0	0	112	0	168	127	82	0	0	141	184	814
Total	0	0	0	112	0	168	127	82	0	0	141	184	814

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 84 WB Ramps / Thornton Ave.	B	11.1	0.649	B	12.4	0.705	+ 1.253 D/V
# 2 84 EB Ramps / Thornton Ave.	C	26.7	0.916	D	39.6	1.019	+12.872 D/V
# 3 Gateway Blvd. / Thornton Ave.	C	28.1	0.818	D	47.1	0.956	+19.036 D/V
# 4 Jarvis Ave. / Newark Blvd.	E	73.9	1.046	E	75.5	1.050	+ 1.573 D/V
# 5 Cedar Blvd. / Newark Blvd.	E	79.1	1.071	F	81.3	1.078	+ 2.201 D/V
# 6 Cedar Blvd. / Lake Blvd.	B	16.1	0.561	B	16.3	0.572	+ 0.269 D/V
# 7 Thornton Ave. / Willow St.	C	25.8	0.496	E	75.1	0.974	+49.254 D/V
# 8 Thornton Ave. / Spruce St.	B	12.1	0.637	B	15.4	0.769	+ 3.301 D/V
# 9 Thornton Ave. / Cherry St.	D	43.9	0.904	D	50.6	0.981	+ 6.725 D/V
# 10 Thornton Ave. / Newark Blvd.	E	63.8	1.010	E	77.6	1.082	+13.784 D/V
# 11 Thornton Ave. / Cedar Blvd.	F	123.1	1.274	F	134.4	1.330	+11.314 D/V
# 12 Thornton Ave. / SB 880 Ramps	B	17.4	0.852	B	19.4	0.903	+ 2.028 D/V
# 13 Thornton Ave. / NB 880 Ramps	B	13.8	0.839	B	14.5	0.858	+ 0.613 D/V
# 14 Enterprise Dr / Willow St	B	14.4	0.153	F	OVRFL	7.363	+2129.332 D/
# 15 Central Ave. / Cherry St.	C	31.4	0.768	D	45.0	0.972	+13.582 D/V
# 16 Central Ave. / Cedar Blvd.	F	175.0	1.392	F	176.8	1.399	+ 1.758 D/V
# 17 Mowry Ave. / Cherry St.	F	104.2	1.221	F	148.4	1.396	+44.196 D/V
# 18 Mowry Ave. / SB 880 Ramps	B	14.1	0.781	B	14.1	0.788	-0.023 D/V
# 19 Mowry Ave. / NB 880 Ramps	C	34.9	1.000	D	35.4	1.006	+ 0.487 D/V

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 84 WB Ramps / Thornton Ave.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.705
Loss Time (sec):	8	Average Delay (sec/veh):	12.4
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Thornton Ave.						84 WB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Ignore			Ignore			Include			Include		
Min. Green:	0	10	10	0	10	10	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	0 0	2	0 1	0 0	0	0 0	1 0	0	0 1
Volume Module:5:00PM												
Base Vol:	0	1370	330	0	400	340	0	0	0	310	0	230
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	1370	330	0	400	340	0	0	0	310	0	230
Added Vol:	0	40	62	0	64	0	0	0	0	66	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	1410	392	0	464	340	0	0	0	376	0	230
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1410	0	0	464	0	0	0	0	376	0	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1410	0	0	464	0	0	0	0	376	0	230
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1410	0	0	464	0	0	0	0	376	0	230
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	1.00	1.00	0.93	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	0	3538	1900	0	3538	1900	0	0	0	1769	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.00	0.40	0.00	0.00	0.13	0.00	0.00	0.00	0.00	0.21	0.00	0.15
Crit Moves:		****								****		
Green Time:	0.0	33.9	0.0	0.0	33.9	0.0	0.0	0.0	0.0	18.1	0.0	18.1
Volume/Cap:	0.00	0.71	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.71	0.00	0.48
Delay/Veh:	0.0	10.6	0.0	0.0	6.6	0.0	0.0	0.0	0.0	22.9	0.0	17.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	10.6	0.0	0.0	6.6	0.0	0.0	0.0	0.0	22.9	0.0	17.9
LOS by Move:	A	B	A	A	A	A	A	A	A	C	A	B
HCM2kAvgQ:	0	9	0	0	2	0	0	0	0	8	0	4

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #2 84 EB Ramps / Thornton Ave.

Cycle (sec):	80	Critical Vol./Cap.(X):	1.019
Loss Time (sec):	8	Average Delay (sec/veh):	39.6
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Thornton Ave.						84 EB Ramps					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Split Phase			Split Phase		
Rights:	Include			Ignore			Include			Ignore		
Min. Green:	0	10	10	0	10	10	10	10	10	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	0 0	2	0 1	1 0	0	1 0	0 0	0	0 0
Volume Module:5:00PM												
Base Vol:	0	860	140	0	560	110	840	0	920	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	860	140	0	560	110	840	0	920	0	0	0
Added Vol:	0	101	43	0	130	0	0	0	102	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	961	183	0	690	110	840	0	1022	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	0	961	183	0	690	0	840	0	1022	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	961	183	0	690	0	840	0	1022	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	0	961	183	0	690	0	840	0	1022	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	1.00	0.93	1.00	0.93	1.00	0.83	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	0.00	2.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	0	3538	1583	0	3538	1900	1769	0	1583	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.27	0.12	0.00	0.20	0.00	0.47	0.00	0.65	0.00	0.00	0.00
Crit Moves:		****							****			
Green Time:	0.0	21.3	21.3	0.0	21.3	0.0	50.7	0.0	50.7	0.0	0.0	0.0
Volume/Cap:	0.00	1.02	0.43	0.00	0.73	0.00	0.75	0.00	1.02	0.00	0.00	0.00
Delay/Veh:	0.0	63.6	25.1	0.0	29.7	0.0	13.1	0.0	48.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	63.6	25.1	0.0	29.7	0.0	13.1	0.0	48.0	0.0	0.0	0.0
LOS by Move:	A	E	C	A	C	A	B	A	D	A	A	A
HCM2kAvgQ:	0	13	3	0	8	0	16	0	35	0	0	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Gateway Blvd. / Thornton Ave.

Cycle (sec):	120	Critical Vol./Cap.(X):	0.956
Loss Time (sec):	12	Average Delay (sec/veh):	47.1
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Thornton Ave.						Gateway Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	0 1	2 0	1	0 0	0 0	0	0 0	1 0	0	0 2
Volume Module: >> Count Date: 17 May 2007 <<												
Base Vol:	0	550	60	420	1070	0	0	0	0	40	0	450
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	550	60	420	1070	0	0	0	0	40	0	450
Added Vol:	0	144	3	0	232	0	0	0	0	5	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	694	63	420	1302	0	0	0	0	45	0	450
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	694	63	420	1302	0	0	0	0	45	0	450
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	694	63	420	1302	0	0	0	0	45	0	450
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	694	63	420	1302	0	0	0	0	45	0	450
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.93	0.83	0.90	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.73
Lanes:	0.00	2.00	1.00	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3538	1583	3432	1862	0	0	0	0	1769	0	2786
Capacity Analysis Module:												
Vol/Sat:	0.00	0.20	0.04	0.12	0.70	0.00	0.00	0.00	0.00	0.03	0.00	0.16
Crit Moves:					****							****
Green Time:	0.0	20.0	20.0	71.4	91.5	0.0	0.0	0.0	0.0	16.5	0.0	88.0
Volume/Cap:	0.00	1.17	0.24	0.21	0.92	0.00	0.00	0.00	0.00	0.18	0.00	0.22
Delay/Veh:	0.0	145	43.8	11.2	20.9	0.0	0.0	0.0	0.0	46.2	0.0	5.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	145	43.8	11.2	20.9	0.0	0.0	0.0	0.0	46.2	0.0	5.2
LOS by Move:	A	F	D	B	C	A	A	A	A	D	A	A
HCM2kAvgQ:	0	21	2	3	39	0	0	0	0	1	0	3

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #4 Jarvis Ave. / Newark Blvd.

Cycle (sec):	120	Critical Vol./Cap.(X):	1.050
Loss Time (sec):	16	Average Delay (sec/veh):	75.5
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Newark Blvd.						Jarvis Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	1 0		2 0 2	0 1		2 0 0	1 0		1 0 1	1 0	
Volume Module: >> Count Date: 24 May 2006 << 5:00-6:00 pm												
Base Vol:	170	1180	70	690	1160	690	690	180	180	180	190	240
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	170	1180	70	690	1160	690	690	180	180	180	190	240
Added Vol:	4	6	6	0	10	0	0	0	5	10	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	174	1186	76	690	1170	690	690	180	185	190	190	240
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	174	1186	76	690	1170	690	690	180	185	190	190	240
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	174	1186	76	690	1170	690	690	180	185	190	190	240
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	174	1186	76	690	1170	690	690	180	185	190	190	240
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.92	0.92	0.90	0.93	0.83	0.90	0.91	0.91	0.93	0.85	0.85
Lanes:	1.00	1.88	0.12	2.00	2.00	1.00	2.00	0.49	0.51	1.00	1.00	1.00
Final Sat.:	1769	3295	211	3432	3538	1583	3432	848	872	1769	1620	1620
Capacity Analysis Module:												
Vol/Sat:	0.10	0.36	0.36	0.20	0.33	0.44	0.20	0.21	0.21	0.11	0.12	0.15
Crit Moves:		****		****			****					****
Green Time:	11.8	41.1	41.1	23.0	52.3	52.3	23.0	26.5	26.5	13.4	16.9	16.9
Volume/Cap:	1.00	1.05	1.05	1.05	0.76	1.00	1.05	0.96	0.96	0.96	0.83	1.05
Delay/Veh:	122.4	79.7	79.7	97.5	30.8	68.2	97.5	82.2	82.2	105.7	61.1	109.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	122.4	79.7	79.7	97.5	30.8	68.2	97.5	82.2	82.2	105.7	61.1	109.8
LOS by Move:	F	E	E	F	C	E	F	F	F	F	E	F
HCM2kAvgQ:	10	33	33	17	19	31	17	16	16	11	10	15

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #5 Cedar Blvd. / Newark Blvd.

Cycle (sec):	130	Critical Vol./Cap.(X):	1.078
Loss Time (sec):	16	Average Delay (sec/veh):	81.3
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Newark Blvd.						Cedar Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:5:00PM												
Base Vol:	150	940	30	550	1500	120	130	300	240	90	300	450
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	150	940	30	550	1500	120	130	300	240	90	300	450
Added Vol:	0	21	0	0	35	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	150	961	30	550	1535	120	130	300	240	90	300	450
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	150	961	30	550	1535	120	130	300	240	90	300	450
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	150	961	30	550	1535	120	130	300	240	90	300	450
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	150	961	30	550	1535	120	130	300	240	90	300	450
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.93	0.93	0.92	0.92	0.93	0.87	0.87	0.93	0.85	0.85
Lanes:	1.00	1.94	0.06	1.00	1.85	0.15	1.00	1.11	0.89	1.00	1.00	1.00
Final Sat.:	1769	3417	107	1769	3245	254	1769	1834	1467	1769	1610	1610
Capacity Analysis Module:												
Vol/Sat:	0.08	0.28	0.28	0.31	0.47	0.47	0.07	0.16	0.16	0.05	0.19	0.28
Crit Moves:		****		****			****					****
Green Time:	10.9	33.9	33.9	37.5	60.6	60.6	8.9	32.0	32.0	10.5	33.7	33.7
Volume/Cap:	1.02	1.08	1.08	1.08	1.02	1.02	1.08	0.66	0.66	0.63	0.72	1.08
Delay/Veh:	137.7	101	101.0	108.7	60.9	60.9	165.0	46.2	46.2	66.3	46.3	105.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	137.7	101	101.0	108.7	60.9	60.9	165.0	46.2	46.2	66.3	46.3	105.2
LOS by Move:	F	F	F	F	E	E	F	D	D	E	D	F
HCM2kAvgQ:	10	30	30	31	43	43	9	11	11	4	12	25

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #6 Cedar Blvd. / Lake Blvd.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.572
Loss Time (sec):	12	Average Delay (sec/veh):	16.3
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	Cedar Blvd.						Lake Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
Rights:	Include			Ignore			Ignore			Include		
Min. Green:	7	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 0	0 0	0	0 0	1 0	0	0 1
Volume Module:5:00PM												
Base Vol:	20	720	180	80	730	0	0	0	0	250	0	10
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	720	180	80	730	0	0	0	0	250	0	10
Added Vol:	0	0	7	0	0	0	0	0	0	11	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	720	187	80	730	0	0	0	0	261	0	10
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	20	720	187	80	730	0	0	0	0	261	0	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	720	187	80	730	0	0	0	0	261	0	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	20	720	187	80	730	0	0	0	0	261	0	10
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.90	0.90	0.93	0.93	1.00	1.00	1.00	1.00	0.93	1.00	0.83
Lanes:	1.00	1.59	0.41	1.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00
Final Sat.:	1769	2721	707	1769	3538	0	0	0	0	1769	0	1583
Capacity Analysis Module:												
Vol/Sat:	0.01	0.26	0.26	0.05	0.21	0.00	0.00	0.00	0.00	0.15	0.00	0.01
Crit Moves:		****		****						****		
Green Time:	12.0	26.3	26.3	7.0	21.3	0.0	0.0	0.0	0.0	14.7	0.0	14.7
Volume/Cap:	0.06	0.60	0.60	0.39	0.58	0.00	0.00	0.00	0.00	0.60	0.00	0.03
Delay/Veh:	19.5	13.6	13.6	25.7	16.4	0.0	0.0	0.0	0.0	22.5	0.0	17.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.5	13.6	13.6	25.7	16.4	0.0	0.0	0.0	0.0	22.5	0.0	17.3
LOS by Move:	B	B	B	C	B	A	A	A	A	C	A	B
HCM2kAvgQ:	0	7	7	1	5	0	0	0	0	5	0	0

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2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Thornton Ave. / Willow St.

Cycle (sec):	145	Critical Vol./Cap.(X):	0.974
Loss Time (sec):	16	Average Delay (sec/veh):	75.1
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Willow St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0	0 1	0	1 0	1 1	0	1 0	0 1 0
Volume Module: >> Count Date: 17 May 2007 << 5:00-6:00 pm												
Base Vol:	120	10	130	20	10	10	50	830	260	20	560	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	120	10	130	20	10	10	50	830	260	20	560	30
Added Vol:	147	3	233	0	3	0	0	0	237	381	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	267	13	363	20	13	10	50	830	497	401	560	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	267	13	363	20	13	10	50	830	497	401	560	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	267	13	363	20	13	10	50	830	497	401	560	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	267	13	363	20	13	10	50	830	497	401	560	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.92	0.92	0.93	0.88	0.88	0.93	0.97	0.97
Lanes:	1.91	0.09	1.00	1.00	0.57	0.43	1.00	1.25	0.75	1.00	0.95	0.05
Final Sat.:	3388	165	1583	1769	984	757	1769	2089	1251	1769	1753	94
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.23	0.01	0.01	0.01	0.03	0.40	0.40	0.23	0.32	0.32
Crit Moves:			****		****			****		****		
Green Time:	32.0	32.0	32.0	10.0	10.0	10.0	11.4	55.4	55.4	31.6	75.6	75.6
Volume/Cap:	0.36	0.36	1.04	0.16	0.19	0.19	0.36	1.04	1.04	1.04	0.61	0.61
Delay/Veh:	48.1	48.1	115.4	64.2	64.5	64.5	64.9	81.0	81.0	113.2	25.6	25.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.1	48.1	115.4	64.2	64.5	64.5	64.9	81.0	81.0	113.2	25.6	25.6
LOS by Move:	D	D	F	E	E	E	E	F	F	F	C	C
HCM2kAvgQ:	5	5	22	1	1	1	2	38	38	24	18	18

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2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #8 Thornton Ave. / Spruce St.

Cycle (sec):	115	Critical Vol./Cap.(X):	0.769
Loss Time (sec):	8	Average Delay (sec/veh):	15.4
Optimal Cycle:	61	Level Of Service:	B

Street Name:	Spruce St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	1! 0	0	0	1! 0	1	0	0 1	0	1	0 0 1 0
Volume Module:5:00PM												
Base Vol:	20	20	30	60	30	20	20	890	20	40	620	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	20	20	30	60	30	20	20	890	20	40	620	60
Added Vol:	0	0	0	0	0	14	9	212	0	0	347	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	20	20	30	60	30	34	29	1102	20	40	967	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	20	20	30	60	30	34	29	1102	20	40	967	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	20	20	30	60	30	34	29	1102	20	40	967	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	20	20	30	60	30	34	29	1102	20	40	967	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	0.91	0.91	0.92	0.92	0.92	0.17	0.98	0.98	0.13	0.97	0.97
Lanes:	0.28	0.29	0.43	0.49	0.24	0.27	1.00	0.98	0.02	1.00	0.94	0.06
Final Sat.:	494	494	741	847	423	480	330	1823	33	246	1737	108
Capacity Analysis Module:												
Vol/Sat:	0.04	0.04	0.04	0.07	0.07	0.07	0.09	0.60	0.60	0.16	0.56	0.56
Crit Moves:	****				****			****				
Green Time:	10.0	10.1	10.1	10.1	10.2	10.2	86.8	86.8	86.8	86.8	86.8	86.8
Volume/Cap:	0.47	0.46	0.46	0.81	0.80	0.80	0.12	0.80	0.80	0.22	0.74	0.74
Delay/Veh:	52.2	52.1	52.1	77.7	76.3	76.3	4.0	12.1	12.1	4.7	9.9	9.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	52.2	52.1	52.1	77.7	76.3	76.3	4.0	12.1	12.1	4.7	9.9	9.9
LOS by Move:	D	D	D	E	E	E	A	B	B	A	A	A
HCM2kAvgQ:	3	3	3	6	6	6	0	26	26	1	21	21

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #9 Thornton Ave. / Cherry St.

Cycle (sec):	105	Critical Vol./Cap.(X):	0.981
Loss Time (sec):	16	Average Delay (sec/veh):	50.6
Optimal Cycle:	168	Level Of Service:	D

Street Name:	Cherry St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Ovl			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	0 1	0	0 1	1	0 1	1 0	1	0 1	1 0
Volume Module: >> Count Date: 27 Sep 2006 << 5:00-6:00 pm												
Base Vol:	450	200	190	60	270	30	60	480	490	200	390	60
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	450	200	190	60	270	30	60	480	490	200	390	60
Added Vol:	7	0	0	0	0	0	0	202	11	0	332	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	457	200	190	60	270	30	60	682	501	200	722	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	457	200	190	60	270	30	60	682	501	200	722	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	457	200	190	60	270	30	60	682	501	200	722	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	457	200	190	60	270	30	60	682	501	200	722	60
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.83	0.97	0.97	0.83	0.93	0.87	0.87	0.93	0.92	0.92
Lanes:	1.39	0.61	1.00	0.18	0.82	1.00	1.00	1.15	0.85	1.00	1.85	0.15
Final Sat.:	2502	1095	1583	335	1510	1583	1769	1911	1404	1769	3227	268
Capacity Analysis Module:												
Vol/Sat:	0.18	0.18	0.12	0.18	0.18	0.02	0.03	0.36	0.36	0.11	0.22	0.22
Crit Moves:		****			****			****			****	
Green Time:	19.6	19.6	31.7	19.1	19.1	19.1	11.5	38.2	57.8	12.1	38.8	38.8
Volume/Cap:	0.98	0.98	0.40	0.98	0.98	0.10	0.31	0.98	0.65	0.98	0.61	0.61
Delay/Veh:	72.4	72.4	29.7	86.5	86.5	35.9	44.0	54.4	17.4	103.6	27.8	27.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	72.4	72.4	29.7	86.5	86.5	35.9	44.0	54.4	17.4	103.6	27.8	27.8
LOS by Move:	E	E	C	F	F	D	D	D	B	F	C	C
HCM2kAvgQ:	16	16	5	16	16	1	2	26	14	11	11	11

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #10 Thornton Ave. / Newark Blvd.

Cycle (sec):	125	Critical Vol./Cap.(X):	1.082
Loss Time (sec):	16	Average Delay (sec/veh):	77.6
Optimal Cycle:	180	Level Of Service:	E

Street Name:	Newark Blvd.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 1	1	0	1 0 1	1	0	1 0 1	1	0	1 0 1	1	0
Volume Module:5:00PM												
Base Vol:	190	920	150	130	1180	130	150	750	240	190	440	80
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	190	920	150	130	1180	130	150	750	240	190	440	80
Added Vol:	0	3	0	0	4	32	20	181	0	0	300	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	190	923	150	130	1184	162	170	931	240	190	740	80
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	190	923	150	130	1184	162	170	931	240	190	740	80
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	190	923	150	130	1184	162	170	931	240	190	740	80
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	190	923	150	130	1184	162	170	931	240	190	740	80
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.91	0.91	0.93	0.91	0.91	0.93	0.90	0.90	0.93	0.92	0.92
Lanes:	1.00	1.72	0.28	1.00	1.76	0.24	1.00	1.59	0.41	1.00	1.80	0.20
Final Sat.:	1769	2979	484	1769	3056	418	1769	2726	703	1769	3145	340
Capacity Analysis Module:												
Vol/Sat:	0.11	0.31	0.31	0.07	0.39	0.39	0.10	0.34	0.34	0.11	0.24	0.24
Crit Moves:	****				****			****			****	
Green Time:	12.4	46.2	46.2	11.0	44.7	44.7	15.0	39.4	39.4	12.4	36.8	36.8
Volume/Cap:	1.08	0.84	0.84	0.84	1.08	1.08	0.80	1.08	1.08	1.08	0.80	0.80
Delay/Veh:	147.9	41.1	41.1	87.4	91.0	91.0	72.4	95.3	95.3	147.9	45.2	45.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	147.9	41.1	41.1	87.4	91.0	91.0	72.4	95.3	95.3	147.9	45.2	45.2
LOS by Move:	F	D	D	F	F	F	E	F	F	F	D	D
HCM2kAvgQ:	12	22	22	7	38	38	8	34	34	12	17	17

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #11 Thornton Ave. / Cedar Blvd.

Cycle (sec):	135	Critical Vol./Cap.(X):	1.330
Loss Time (sec):	16	Average Delay (sec/veh):	134.4
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Cedar Blvd.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	2 0	2 0	1	1 0	1 1	0	1 0	2 0	1
Volume Module:4:45PM												
Base Vol:	130	530	590	580	440	40	170	680	100	630	710	320
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	130	530	590	580	440	40	170	680	100	630	710	320
Added Vol:	0	0	0	0	0	11	7	175	0	0	289	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	130	530	590	580	440	51	177	855	100	630	999	320
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	130	530	590	580	440	51	177	855	100	630	999	320
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	130	530	590	580	440	51	177	855	100	630	999	320
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	130	530	590	580	440	51	177	855	100	630	999	320
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.92	0.92	0.93	0.93	0.83
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.79	0.21	1.00	2.00	1.00
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	3117	365	1769	3538	1583
Capacity Analysis Module:												
Vol/Sat:	0.07	0.15	0.37	0.17	0.12	0.03	0.10	0.27	0.27	0.36	0.28	0.20
Crit Moves:			****	****				****		****		
Green Time:	37.8	37.8	37.8	17.2	17.2	17.2	16.7	27.8	27.8	36.2	47.3	64.4
Volume/Cap:	0.26	0.53	1.33	1.33	0.98	0.25	0.81	1.33	1.33	1.33	0.81	0.42
Delay/Veh:	38.0	41.7	211.9	222.5	95.5	53.8	76.9	212	211.5	211.9	43.7	23.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.0	41.7	211.9	222.5	95.5	53.8	76.9	212	211.5	211.9	43.7	23.5
LOS by Move:	D	D	F	F	F	D	E	F	F	F	D	C
HCM2kAvgQ:	4	10	44	22	11	2	9	38	38	44	19	8

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2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #12 Thornton Ave. / SB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.903
Loss Time (sec):	8	Average Delay (sec/veh):	19.4
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	SB 880 Ramps						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Ignore			Ignore			Ignore		
Min. Green:	0	0	0	10	0	10	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0	0 0	2	0	0 0 1	0	0	2 0 1	0	0	2 0 1
Volume Module: >> Count Date: 9 May 2007 << 5:00-6:00 pm												
Base Vol:	0	0	0	1040	0	370	0	1540	250	0	1320	380
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	1040	0	370	0	1540	250	0	1320	380
Added Vol:	0	0	0	0	0	212	0	156	18	0	77	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	1040	0	582	0	1696	268	0	1397	380
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	1040	0	0	0	1696	0	0	1397	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	1040	0	0	0	1696	0	0	1397	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	1040	0	0	0	1696	0	0	1397	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	1.00	1.00	0.93	1.00	1.00	0.93	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	0	0	0	3432	0	1900	0	3538	1900	0	3538	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.30	0.00	0.00	0.00	0.48	0.00	0.00	0.39	0.00
Crit Moves:				****				****				
Green Time:	0.0	0.0	0.0	20.1	0.0	0.0	0.0	31.9	0.0	0.0	31.9	0.0
Volume/Cap:	0.00	0.00	0.00	0.90	0.00	0.00	0.00	0.90	0.00	0.00	0.74	0.00
Delay/Veh:	0.0	0.0	0.0	29.0	0.0	0.0	0.0	19.2	0.0	0.0	12.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	29.0	0.0	0.0	0.0	19.2	0.0	0.0	12.6	0.0
LOS by Move:	A	A	A	C	A	A	A	B	A	A	B	A
HCM2kAvgQ:	0	0	0	14	0	0	0	14	0	0	11	0

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2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #13 Thornton Ave. / NB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.858
Loss Time (sec):	8	Average Delay (sec/veh):	14.5
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	NB 880 Ramps						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Include			Include			Ignore			Include		
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1! 0	1	0	0	0	0	0	2	0	1	0	0	3	0	0
Volume Module: >> Count Date: 10 May 2007 << 6:00-7:00 pm												
Base Vol:	640	0	340	0	0	0	0	1770	810	0	1060	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	640	0	340	0	0	0	0	1770	810	0	1060	0
Added Vol:	26	0	0	0	0	0	0	31	126	0	51	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	666	0	340	0	0	0	0	1801	936	0	1111	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	666	0	340	0	0	0	0	1801	0	0	1111	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	666	0	340	0	0	0	0	1801	0	0	1111	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	666	0	340	0	0	0	0	1801	0	0	1111	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.90	1.00	1.00	1.00	1.00	0.93	1.00	1.00	0.89	1.00
Lanes:	1.66	0.00	1.34	0.00	0.00	0.00	0.00	2.00	1.00	0.00	3.00	0.00
Final Sat.:	2843	0	2289	0	0	0	0	3538	1900	0	5083	0
Capacity Analysis Module:												
Vol/Sat:	0.23	0.00	0.15	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.22	0.00
Crit Moves:	****							****				
Green Time:	16.4	0.0	16.4	0.0	0.0	0.0	0.0	35.6	0.0	0.0	35.6	0.0
Volume/Cap:	0.86	0.00	0.54	0.00	0.00	0.00	0.00	0.86	0.00	0.00	0.37	0.00
Delay/Veh:	27.2	0.0	19.0	0.0	0.0	0.0	0.0	13.9	0.0	0.0	6.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	27.2	0.0	19.0	0.0	0.0	0.0	0.0	13.9	0.0	0.0	6.4	0.0
LOS by Move:	C	A	B	A	A	A	A	B	A	A	A	A
HCM2kAvgQ:	10	0	5	0	0	0	0	14	0	0	4	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #14 Enterprise Dr / Willow St

Average Delay (sec/veh): 379.6 Worst Case Level Of Service: F[2143.7]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0 1! 0	0		0	0 1! 0	0		0	1 0	1 0		0	1 1	0 1	
Volume Module:																
Base Vol:	10	130	10		140	140	10		10	10	10		10	10	140	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	10	130	10		140	140	10		10	10	10		10	10	140	
Added Vol:	142	127	42		127	168	327		192	17	91		21	8	64	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	152	257	52		267	308	337		202	27	101		31	18	204	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	152	257	52		267	308	337		202	27	101		31	18	204	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	152	257	52		267	308	337		202	27	101		31	18	204	
Critical Gap Module:																
Critical Gp:	4.1	xxxx	xxxxx		4.1	xxxx	xxxxx		7.1	6.5	6.2		7.1	6.5	6.2	
FollowUpTim:	2.2	xxxx	xxxxx		2.2	xxxx	xxxxx		3.5	4.0	3.3		3.5	4.0	3.3	
Capacity Module:																
Cnflict Vol:	645	xxxx	xxxxx		309	xxxx	xxxxx		1709	1624	477		1662	1766	283	
Potent Cap.:	940	xxxx	xxxxx		1252	xxxx	xxxxx		72	103	589		77	84	756	
Move Cap.:	940	xxxx	xxxxx		1252	xxxx	xxxxx		27	63	589		31	52	756	
Volume/Cap:	0.16	xxxx	xxxx		0.21	xxxx	xxxx		7.36	0.43	0.17		1.00	0.35	0.27	
Level Of Service Module:																
2Way95thQ:	0.6	xxxx	xxxxx		0.8	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	0.6	1.1	
Control Del:	9.6	xxxx	xxxxx		8.7	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	88.8	11.5	
LOS by Move:	A	*	*		A	*	*		*	*	*		*	F	B	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		29	xxxx	214		34	xxxx	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		28.0	xxxx	3.4		4.3	xxxx	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		3317	xxxx	44.1		391.7	xxxx	xxxxx	
Shared LOS:	*	*	*		*	*	*		F	*	E		F	*	*	
ApproachDel:	xxxxxx				xxxxxx				2143.7				74.4			
ApproachLOS:	*				*				F				F			

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #15 Central Ave. / Cherry St.

Cycle (sec):	90	Critical Vol./Cap.(X):	0.972
Loss Time (sec):	16	Average Delay (sec/veh):	45.0
Optimal Cycle:	142	Level Of Service:	D

Street Name:	Cherry St.						Central Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Ovl			Ovl			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 2	0	1	1 0 1	1	0	1 0 1	0	1	2 0 1	1	0
Volume Module: >> Count Date: 5 Oct 2006 << 4:45-5:45 pm												
Base Vol:	340	700	230	110	760	20	20	210	460	360	100	90
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	340	700	230	110	760	20	20	210	460	360	100	90
Added Vol:	271	0	0	0	0	8	5	23	161	0	36	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	611	700	230	110	760	28	25	233	621	360	136	90
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	611	700	230	110	760	28	25	233	621	360	136	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	611	700	230	110	760	28	25	233	621	360	136	90
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	611	700	230	110	760	28	25	233	621	360	136	90
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.93	0.93	0.93	0.98	0.83	0.90	0.88	0.88
Lanes:	1.00	2.00	1.00	1.00	1.93	0.07	1.00	1.00	1.00	2.00	1.20	0.80
Final Sat.:	1769	3538	1583	1769	3395	125	1769	1862	1583	3432	2001	1324
Capacity Analysis Module:												
Vol/Sat:	0.35	0.20	0.15	0.06	0.22	0.22	0.01	0.13	0.39	0.10	0.07	0.07
Crit Moves:	****				****			****			****	
Green Time:	32.0	37.8	47.5	14.9	20.7	29.5	8.8	11.6	43.6	9.7	12.5	12.5
Volume/Cap:	0.97	0.47	0.28	0.38	0.97	0.68	0.15	0.97	0.81	0.97	0.49	0.49
Delay/Veh:	57.5	19.1	11.9	34.3	59.2	27.9	37.6	89.2	26.2	79.2	36.6	36.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.5	19.1	11.9	34.3	59.2	27.9	37.6	89.2	26.2	79.2	36.6	36.6
LOS by Move:	E	B	B	C	E	C	D	F	C	E	D	D
HCM2kAvgQ:	23	8	4	3	17	11	1	11	17	9	4	4

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #16 Central Ave. / Cedar Blvd.

Cycle (sec):	150	Critical Vol./Cap.(X):	1.399
Loss Time (sec):	16	Average Delay (sec/veh):	176.8
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Cedar Blvd.						Central Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Include		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:4:45PM												
Base Vol:	490	840	540	530	480	50	90	1320	100	220	680	290
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	490	840	540	530	480	50	90	1320	100	220	680	290
Added Vol:	0	0	0	0	0	0	0	20	0	0	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	490	840	540	530	480	50	90	1340	100	220	712	290
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	490	840	540	530	480	50	90	1340	100	220	712	290
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	490	840	540	530	480	50	90	1340	100	220	712	290
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	490	840	540	530	480	50	90	1340	100	220	712	290
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.88	0.88	0.93	0.92	0.92	0.93	0.92	0.92	0.93	0.89	0.89
Lanes:	1.00	1.22	0.78	1.00	1.81	0.19	1.00	1.86	0.14	1.00	1.42	0.58
Final Sat.:	1769	2026	1303	1769	3159	329	1769	3259	243	1769	2406	980
Capacity Analysis Module:												
Vol/Sat:	0.28	0.41	0.41	0.30	0.15	0.15	0.05	0.41	0.41	0.12	0.30	0.30
Crit Moves:		****		****				****		****		
Green Time:	49.5	44.4	44.4	32.1	27.1	27.1	8.4	44.1	44.1	13.3	49.0	49.0
Volume/Cap:	0.84	1.40	1.40	1.40	0.84	0.84	0.91	1.40	1.40	1.40	0.91	0.91
Delay/Veh:	57.1	238	238.5	253.8	69.2	69.2	131.2	238	238.4	281.6	58.9	58.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	57.1	238	238.5	253.8	69.2	69.2	131.2	238	238.4	281.6	58.9	58.9
LOS by Move:	E	F	F	F	E	E	F	F	F	F	E	E
HCM2kAvgQ:	23	59	59	44	15	15	7	62	62	20	26	26

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2020 Analysis
Future Year 2035 Base Plus Project PM

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Mowry Ave. / Cherry St.

Cycle (sec):	160	Critical Vol./Cap.(X):	1.396
Loss Time (sec):	16	Average Delay (sec/veh):	148.4
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Cherry St.						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	2 0	2 0	1	1 0	1 0	1	1 0	1 0	1
Volume Module: >> Count Date: 3 Oct 2006 << 4:45-5:45 pm												
Base Vol:	50	850	710	730	920	90	100	220	60	230	170	940
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	850	710	730	920	90	100	220	60	230	170	940
Added Vol:	0	20	0	147	12	0	0	0	0	0	0	249
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	870	710	877	932	90	100	220	60	230	170	1189
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	870	710	877	932	90	100	220	60	230	170	1189
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	870	710	877	932	90	100	220	60	230	170	1189
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	870	710	877	932	90	100	220	60	230	170	1189
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.98	0.83	0.93	0.98	0.83
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	1862	1583	1769	1862	1583
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.45	0.26	0.26	0.06	0.06	0.12	0.04	0.13	0.09	0.75
Crit Moves:			****	****			****					****
Green Time:	11.5	51.2	51.2	29.2	69.0	69.0	7.0	30.3	41.7	33.3	56.6	85.8
Volume/Cap:	0.39	0.77	1.40	1.40	0.61	0.13	1.29	0.62	0.15	0.62	0.26	1.40
Delay/Veh:	73.0	52.3	246.6	255.5	35.9	27.6	275.8	63.1	45.6	61.0	37.0	224.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.0	52.3	246.6	255.5	35.9	27.6	275.8	63.1	45.6	61.0	37.0	224.8
LOS by Move:	E	D	F	F	D	C	F	E	D	E	D	F
HCM2kAvgQ:	3	21	60	39	18	3	10	11	2	11	6	99

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #18 Mowry Ave. / SB 880 Ramps

Cycle (sec):	60	Critical Vol./Cap.(X):	0.788
Loss Time (sec):	8	Average Delay (sec/veh):	14.1
Optimal Cycle:	OPTIMIZED	Level Of Service:	B

Street Name:	SB 880 Ramps						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Ignore			Ovl			Ignore			Ignore		
Min. Green:	0	0	0	10	0	10	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	0 0	0	2	0 0	0 2	0 0	3	0 1	0 0	3	0 1
Volume Module:4:45PM												
Base Vol:	0	0	0	830	0	650	0	2210	630	0	1230	560
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	830	0	650	0	2210	630	0	1230	560
Added Vol:	0	0	0	2	0	0	0	29	112	0	240	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	0	832	0	650	0	2239	742	0	1470	560
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	832	0	650	0	2239	0	0	1470	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	832	0	650	0	2239	0	0	1470	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	832	0	650	0	2239	0	0	1470	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.90	1.00	0.73	1.00	0.89	1.00	1.00	0.89	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3432	0	2786	0	5083	1900	0	5083	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.24	0.00	0.23	0.00	0.44	0.00	0.00	0.29	0.00
Crit Moves:				****				****				
Green Time:	0.0	0.0	0.0	18.5	0.0	18.5	0.0	33.5	0.0	0.0	33.5	0.0
Volume/Cap:	0.00	0.00	0.00	0.79	0.00	0.76	0.00	0.79	0.00	0.00	0.52	0.00
Delay/Veh:	0.0	0.0	0.0	23.0	0.0	22.7	0.0	12.0	0.0	0.0	8.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	23.0	0.0	22.7	0.0	12.0	0.0	0.0	8.4	0.0
LOS by Move:	A	A	A	C	A	C	A	B	A	A	A	A
HCM2kAvgQ:	0	0	0	10	0	8	0	14	0	0	6	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #19 Mowry Ave. / NB 880 Ramps

Cycle (sec):	90	Critical Vol./Cap.(X):	1.006
Loss Time (sec):	8	Average Delay (sec/veh):	35.4
Optimal Cycle:	180	Level Of Service:	D

Street Name:	NB 880 Ramps						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Permitted			Permitted		
Rights:	Ovl			Ignore			Ignore			Ignore		
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2 0	0	0 2	0	0	0 0	0	0	3 0 1	0	0	4 0 1
Volume Module:4:30PM												
Base Vol:	450	0	1140	0	0	0	0	2550	460	0	1270	720
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	450	0	1140	0	0	0	0	2550	460	0	1270	720
Added Vol:	190	0	0	0	0	0	0	31	0	0	50	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	640	0	1140	0	0	0	0	2581	460	0	1320	721
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	640	0	1140	0	0	0	0	2581	0	0	1320	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	640	0	1140	0	0	0	0	2581	0	0	1320	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	640	0	1140	0	0	0	0	2581	0	0	1320	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.90	1.00	0.73	1.00	1.00	1.00	1.00	0.89	1.00	1.00	0.89	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	3.00	1.00	0.00	4.00	1.00
Final Sat.:	3432	0	2786	0	0	0	0	5083	1900	0	6778	1900
Capacity Analysis Module:												
Vol/Sat:	0.19	0.00	0.41	0.00	0.00	0.00	0.00	0.51	0.00	0.00	0.19	0.00
Crit Moves:			****					****				
Green Time:	36.6	0.0	36.6	0.0	0.0	0.0	0.0	45.4	0.0	0.0	45.4	0.0
Volume/Cap:	0.46	0.00	1.01	0.00	0.00	0.00	0.00	1.01	0.00	0.00	0.39	0.00
Delay/Veh:	19.7	0.0	55.0	0.0	0.0	0.0	0.0	41.6	0.0	0.0	13.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.7	0.0	55.0	0.0	0.0	0.0	0.0	41.6	0.0	0.0	13.8	0.0
LOS by Move:	B	A	E	A	A	A	A	D	A	A	B	A
HCM2kAvgQ:	7	0	25	0	0	0	0	30	0	0	6	0

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions W/ Mitigation

Scenario Report

Scenario:	Pj_AM
Command:	Existing AM + Project
Volume:	Ex_AM
Geometry:	Ex_AM
Impact Fee:	Default Impact Fee
Trip Generation:	Project AM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions W/ Mitigation

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Thornton Ave. / Willow St.

Cycle (sec):	80	Critical Vol./Cap.(X):	0.634
Loss Time (sec):	16	Average Delay (sec/veh):	28.0
Optimal Cycle:	OPTIMIZED	Level Of Service:	C

Street Name:	Willow St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0	0 1	0	1	0 1 1	0	1	0 0 1 0
Volume Module: >> Count Date: 17 May 2007 << 7:30-8:30 am												
Base Vol:	180	20	9	29	36	21	9	121	252	19	287	19
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	180	20	9	29	36	21	9	121	252	19	287	19
Added Vol:	219	1	353	0	2	0	0	0	86	132	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	399	21	362	29	38	21	9	121	338	151	287	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
PHF Volume:	424	22	385	31	40	22	10	129	360	161	305	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	424	22	385	31	40	22	10	129	360	161	305	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	424	22	385	31	40	22	10	129	360	161	305	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.83	0.93	0.93	0.93	0.93	0.83	0.83	0.93	0.97	0.97
Lanes:	1.90	0.10	1.00	1.00	0.64	0.36	1.00	1.00	1.00	1.00	0.94	0.06
Final Sat.:	3379	178	1583	1769	1136	628	1769	1574	1574	1769	1731	115
Capacity Analysis Module:												
Vol/Sat:	0.13	0.13	0.24	0.02	0.04	0.04	0.01	0.08	0.23	0.09	0.18	0.18
Crit Moves:			****		****				****	****		
Green Time:	17.5	17.5	27.9	10.0	10.0	10.0	12.1	26.1	26.1	10.4	24.4	24.4
Volume/Cap:	0.58	0.58	0.70	0.14	0.28	0.28	0.04	0.25	0.70	0.70	0.58	0.58
Delay/Veh:	29.0	29.0	26.4	31.5	32.5	32.5	29.0	19.8	26.6	42.5	24.9	24.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.0	29.0	26.4	31.5	32.5	32.5	29.0	19.8	26.6	42.5	24.9	24.9
LOS by Move:	C	C	C	C	C	C	C	B	C	D	C	C
HCM2kAvgQ:	6	6	9	1	2	2	0	2	8	5	7	7

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions W/ Mitigation

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions W/ Mitigation

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

****

Intersection #14 Enterprise Dr / Willow St

****

Average Delay (sec/veh): 5.6 Level Of Service: A

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			1		
Volume Module:												
Base Vol:	0	90	0	140	160	0	0	0	0	0	0	140
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	90	0	140	160	0	0	0	0	0	0	140
Added Vol:	55	197	9	28	53	139	248	4	129	42	17	128
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	55	287	9	168	213	139	248	4	129	42	17	268
User Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	51	264	8	155	196	128	228	4	119	39	16	247
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	264	8	155	196	128	228	4	119	39	16	247
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	51	264	8	155	196	128	228	4	119	39	16	247
PCE Module:												
AutoPCE:	51	264	8	155	196	128	228	4	119	39	16	247
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	51	264	8	155	196	128	228	4	119	39	16	247

Delay Module: >> Time Period: 0.25 hours <<				
CircVolume:	386	105	389	543
MaxVolume:	991	1143	990	907
PedVolume:	0	0	0	0
AdjMaxVol:	991	1143	990	907
ApproachVol:	323	478	351	301
ApproachV/C:	0.33	0.42	0.35	0.33
ApproachDel:	5.4	5.4	5.6	5.9
ApproachLOS:	A	A	A	A
Queue:	1.4	2.1	1.6	1.5

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions W/ Mitigation

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Mowry Ave. / Cherry St.

Cycle (sec):	85	Critical Vol./Cap.(X):	0.778
Loss Time (sec):	16	Average Delay (sec/veh):	33.9
Optimal Cycle:	OPTIMIZED	Level Of Service:	C

Street Name:	Cherry St.						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	1	2 0	2 0	1	1 0	1 0	1	1 0	0 1	1
Volume Module: >> Count Date: 3 Oct 2006 << 7:15-8:15 am												
Base Vol:	54	1048	348	50	598	55	16	21	12	313	134	469
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	1048	348	50	598	55	16	21	12	313	134	469
Added Vol:	0	6	0	231	19	0	0	0	0	0	0	79
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	54	1054	348	281	617	55	16	21	12	313	134	548
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
PHF Volume:	60	1171	387	312	686	61	18	23	13	348	149	609
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	1171	387	312	686	61	18	23	13	348	149	609
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	60	1171	387	312	686	61	18	23	13	348	149	609
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.98	0.83	0.93	0.86	0.86
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	0.39	1.61
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	1862	1583	1769	643	2630
Capacity Analysis Module:												
Vol/Sat:	0.03	0.33	0.24	0.09	0.19	0.04	0.01	0.01	0.01	0.20	0.23	0.23
Crit Moves:		****		****				****		****		
Green Time:	12.0	31.6	31.6	8.7	28.2	28.2	7.5	10.0	22.0	18.8	21.2	29.9
Volume/Cap:	0.24	0.89	0.66	0.89	0.58	0.12	0.11	0.11	0.03	0.89	0.93	0.66
Delay/Veh:	32.9	33.1	25.0	61.2	24.3	19.8	36.0	33.7	23.6	53.8	47.7	24.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	32.9	33.1	25.0	61.2	24.3	19.8	36.0	33.7	23.6	53.8	47.7	24.7
LOS by Move:	C	C	C	E	C	B	D	C	C	D	D	C
HCM2kAvgQ:	2	19	9	7	8	1	1	1	0	12	14	9

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project AM Conditions W/ Mitigation

Note: Queue reported is the number of cars per lane.

Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM with MIT

Scenario Report

Scenario:	Cum With Pj_AM
Command:	Future _ WITH Project AM
Volume:	Cum_AM
Geometry:	CU_AM
Impact Fee:	Default Impact Fee
Trip Generation:	Project AM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM with MIT

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Gateway Blvd. / Thornton Ave.

Cycle (sec):	60	Critical Vol./Cap.(X):	0.634
Loss Time (sec):	12	Average Delay (sec/veh):	17.4
Optimal Cycle:	76	Level Of Service:	B

Street Name:	Thornton Ave.						Gateway Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	2	0	1 0 0	0 0	0	0 0 0	1	0	0 0 2
Volume Module: >> Count Date: 17 May 2007 << 7:30-8:30 am												
Base Vol:	0	730	30	370	540	0	0	0	0	30	0	480
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	730	30	370	540	0	0	0	0	30	0	480
Added Vol:	0	215	5	0	84	0	0	0	0	1	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	945	35	370	624	0	0	0	0	31	0	480
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	945	35	370	624	0	0	0	0	31	0	480
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	945	35	370	624	0	0	0	0	31	0	480
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	945	35	370	624	0	0	0	0	31	0	480
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.89	0.89	0.90	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.73
Lanes:	0.00	2.89	0.11	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	4877	181	3432	1862	0	0	0	0	1769	0	2786
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.19	0.11	0.34	0.00	0.00	0.00	0.00	0.02	0.00	0.17
Crit Moves:					****							****
Green Time:	0.0	13.3	13.3	22.9	36.2	0.0	0.0	0.0	0.0	11.8	0.0	34.7
Volume/Cap:	0.00	0.88	0.88	0.28	0.56	0.00	0.00	0.00	0.00	0.09	0.00	0.30
Delay/Veh:	0.0	30.6	30.6	12.9	7.7	0.0	0.0	0.0	0.0	19.8	0.0	6.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	30.6	30.6	12.9	7.7	0.0	0.0	0.0	0.0	19.8	0.0	6.5
LOS by Move:	A	C	C	B	A	A	A	A	A	B	A	A
HCM2kAvgQ:	0	7	7	2	7	0	0	0	0	0	0	3

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM with MIT

Note: Queue reported is the number of cars per lane.

Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM with MIT

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Thornton Ave. / Willow St.

Cycle (sec):	80	Critical Vol./Cap.(X):	0.629
Loss Time (sec):	16	Average Delay (sec/veh):	27.8
Optimal Cycle:	OPTIMIZED	Level Of Service:	C

Street Name:	Willow St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0	0 1 0	1	0	1 1 0	1	0	0 1 0
Volume Module: >> Count Date: 17 May 2007 << 7:30-8:30 am												
Base Vol:	190	30	10	30	40	30	10	410	260	20	560	20
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	190	30	10	30	40	30	10	410	260	20	560	20
Added Vol:	219	1	353	0	2	0	0	0	86	132	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	409	31	363	30	42	30	10	410	346	152	560	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	409	31	363	30	42	30	10	410	346	152	560	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	409	31	363	30	42	30	10	410	346	152	560	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	409	31	363	30	42	30	10	410	346	152	560	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.94	0.94	0.83	0.93	0.92	0.92	0.93	0.87	0.87	0.93	0.98	0.98
Lanes:	1.86	0.14	1.00	1.00	0.58	0.42	1.00	1.08	0.92	1.00	0.97	0.03
Final Sat.:	3309	251	1583	1769	1018	727	1769	1786	1507	1769	1789	64
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.23	0.02	0.04	0.04	0.01	0.23	0.23	0.09	0.31	0.31
Crit Moves:			****		****		****				****	
Green Time:	14.7	14.7	25.5	10.0	10.0	10.0	7.0	28.5	28.5	10.9	32.3	32.3
Volume/Cap:	0.67	0.67	0.72	0.14	0.33	0.33	0.06	0.64	0.64	0.63	0.77	0.77
Delay/Veh:	33.3	33.3	29.1	31.4	32.8	32.8	33.7	22.8	22.8	38.1	25.7	25.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.3	33.3	29.1	31.4	32.8	32.8	33.7	22.8	22.8	38.1	25.7	25.7
LOS by Move:	C	C	C	C	C	C	C	C	C	D	C	C
HCM2kAvgQ:	6	6	9	1	2	2	0	8	8	5	14	14

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM with MIT

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM with MIT

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

Intersection #14 Enterprise Dr / Willow St

Average Delay (sec/veh): 5.5 Level Of Service: A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			2		
Volume Module:												
Base Vol:	10	100	10	150	170	10	10	10	10	10	10	150
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	100	10	150	170	10	10	10	10	10	10	150
Added Vol:	55	197	9	28	53	139	248	4	129	42	17	128
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	65	297	19	178	223	149	258	14	139	52	27	278
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	65	297	19	178	223	149	258	14	139	52	27	278
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	297	19	178	223	149	258	14	139	52	27	278
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	65	297	19	178	223	149	258	14	139	52	27	278
PCE Module:												
AutoPCE:	65	297	19	178	223	149	258	14	139	52	27	278
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	65	297	19	178	223	149	258	14	139	52	27	278

Delay Module: >> Time Period: 0.25 hours <<				
CircVolume:	450	144	453	620
MaxVolume:	957	1122	955	1978
PedVolume:	0	0	0	0
AdjMaxVol:	957	1122	955	1978
ApproachVol:	381	550	411	357
ApproachV/C:	0.40	0.49	0.43	0.18
ApproachDel:	6.2	6.3	6.6	2.2
ApproachLOS:	A	A	A	A
Queue:	1.9	2.8	2.2	0.7

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM with MIT

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Mowry Ave. / Cherry St.

Cycle (sec):	150	Critical Vol./Cap.(X):	0.822
Loss Time (sec):	16	Average Delay (sec/veh):	46.0
Optimal Cycle:	107	Level Of Service:	D

Street Name:	Cherry St.						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 2	0	1	2 0 2	0	1	1 0 1	0	1	2 0	0 1	1
Volume Module: >> Count Date: 3 Oct 2006 << 7:15-8:15 am												
Base Vol:	60	1170	430	140	900	120	30	40	20	860	250	590
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	60	1170	430	140	900	120	30	40	20	860	250	590
Added Vol:	0	6	0	231	19	0	0	0	0	0	0	79
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	60	1176	430	371	919	120	30	40	20	860	250	669
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	60	1176	430	371	919	120	30	40	20	860	250	669
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	1176	430	371	919	120	30	40	20	860	250	669
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	60	1176	430	371	919	120	30	40	20	860	250	669
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.98	0.83	0.90	0.87	0.87
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00	0.54	1.46
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	1862	1583	3432	903	2415
Capacity Analysis Module:												
Vol/Sat:	0.03	0.33	0.27	0.11	0.26	0.08	0.02	0.02	0.01	0.25	0.28	0.28
Crit Moves:		****		****			****				****	
Green Time:	11.9	58.8	58.8	19.1	66.1	66.1	7.0	11.8	23.6	44.3	49.0	68.2
Volume/Cap:	0.43	0.85	0.69	0.85	0.59	0.17	0.36	0.27	0.08	0.85	0.85	0.61
Delay/Veh:	67.9	46.6	41.4	78.3	32.3	25.5	72.1	66.1	54.0	56.7	53.4	31.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	67.9	46.6	41.4	78.3	32.3	25.5	72.1	66.1	54.0	56.7	53.4	31.6
LOS by Move:	E	D	D	E	C	C	E	E	D	E	D	C
HCM2kAvgQ:	3	28	17	11	17	3	2	2	1	21	22	16

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project AM with MIT

Note: Queue reported is the number of cars per lane.

Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions with Mitigation

Scenario Report

Scenario:	Pj_PM
Command:	Existing PM + Project
Volume:	Ex_PM
Geometry:	Ex_PM
Impact Fee:	Default Impact Fee
Trip Generation:	Project PM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions with Mitigation

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Thornton Ave. / Willow St.

Cycle (sec):	95	Critical Vol./Cap.(X):	0.747
Loss Time (sec):	16	Average Delay (sec/veh):	35.0
Optimal Cycle:	75	Level Of Service:	C

Street Name:	Willow St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	3.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0	0 1	0	1	0 1 1	0	1	0 0 1 0
Volume Module: >> Count Date: 17 May 2007 << 5:00-6:00 pm												
Base Vol:	112	8	123	18	6	8	42	402	253	10	170	29
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	112	8	123	18	6	8	42	402	253	10	170	29
Added Vol:	147	3	233	0	3	0	0	0	237	381	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	259	11	356	18	9	8	42	402	490	391	170	29
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
PHF Volume:	264	11	363	18	9	8	43	410	500	399	173	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	264	11	363	18	9	8	43	410	500	399	173	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	264	11	363	18	9	8	43	410	500	399	173	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.89	0.93	0.91	0.91	0.93	0.85	0.85	0.93	0.96	0.96
Lanes:	1.92	0.08	1.00	1.00	0.53	0.47	1.00	1.00	1.00	1.00	0.85	0.15
Final Sat.:	3408	145	1689	1769	916	814	1769	1624	1624	1769	1556	265
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.22	0.01	0.01	0.01	0.02	0.25	0.31	0.23	0.11	0.11
Crit Moves:		****		****					****	****		
Green Time:	10.0	10.0	34.9	10.0	10.0	10.0	23.5	34.1	34.1	24.9	35.5	35.5
Volume/Cap:	0.74	0.74	0.58	0.10	0.10	0.10	0.10	0.70	0.86	0.86	0.30	0.30
Delay/Veh:	48.7	48.7	25.6	38.7	38.6	38.6	27.7	28.0	35.4	48.2	21.2	21.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.7	48.7	25.6	38.7	38.6	38.6	27.7	28.0	35.4	48.2	21.2	21.2
LOS by Move:	D	D	C	D	D	D	C	C	D	D	C	C
HCM2kAvgQ:	6	6	8	1	1	1	1	10	15	14	3	3

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions with Mitigation

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions with Mitigation

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

****

Intersection #14 Enterprise Dr / Willow St

****

Average Delay (sec/veh): 13.4 Level Of Service: B

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			1		
Volume Module:												
Base Vol:	0	120	0	130	130	0	0	0	0	0	0	130
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	120	0	130	130	0	0	0	0	0	0	130
Added Vol:	142	127	42	127	168	327	192	17	91	21	8	64
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	142	247	42	257	298	327	192	17	91	21	8	194
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	154	268	46	279	324	355	209	18	99	23	9	211
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	154	268	46	279	324	355	209	18	99	23	9	211
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	154	268	46	279	324	355	209	18	99	23	9	211
PCE Module:												
AutoPCE:	154	268	46	279	324	355	209	18	99	23	9	211
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	154	268	46	279	324	355	209	18	99	23	9	211

Delay Module: >> Time Period: 0.25 hours <<				
CircVolume:	507	186	626	632
MaxVolume:	926	1100	862	859
PedVolume:	0	0	0	0
AdjMaxVol:	926	1100	862	859
ApproachVol:	468	959	326	242
ApproachV/C:	0.51	0.87	0.38	0.28
ApproachDel:	7.8	20.4	6.7	5.8
ApproachLOS:	A	C	A	A
Queue:	2.9	12.1	1.8	1.2

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions with Mitigation

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Mowry Ave. / Cherry St.

Cycle (sec):	85	Critical Vol./Cap.(X):	0.891
Loss Time (sec):	16	Average Delay (sec/veh):	34.4
Optimal Cycle:	OPTIMIZED	Level Of Service:	C

Street Name:	Cherry St.						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 2	0	1	2 0 2	0	1	1 0 1	0	1	1 0	0 1	1
Volume Module: >> Count Date: 3 Oct 2006 << 4:45-5:45 pm												
Base Vol:	41	798	152	387	635	63	76	176	53	68	128	322
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	41	798	152	387	635	63	76	176	53	68	128	322
Added Vol:	0	20	0	147	12	0	0	0	0	0	0	249
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	41	818	152	534	647	63	76	176	53	68	128	571
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
PHF Volume:	46	919	171	600	727	71	85	198	60	76	144	642
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	919	171	600	727	71	85	198	60	76	144	642
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	919	171	600	727	71	85	198	60	76	144	642
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.98	0.83	0.93	0.86	0.86
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	0.37	1.63
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	1862	1583	1769	598	2668
Capacity Analysis Module:												
Vol/Sat:	0.03	0.26	0.11	0.17	0.21	0.04	0.05	0.11	0.04	0.04	0.24	0.24
Crit Moves:		****		****			****				****	
Green Time:	11.4	23.9	23.9	16.1	28.5	28.5	7.0	17.1	28.5	12.0	22.1	38.1
Volume/Cap:	0.19	0.93	0.38	0.93	0.61	0.13	0.59	0.53	0.11	0.31	0.93	0.54
Delay/Veh:	33.1	43.7	25.2	53.2	24.6	19.8	43.7	31.7	19.6	33.5	46.4	17.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.1	43.7	25.2	53.2	24.6	19.8	43.7	31.7	19.6	33.5	46.4	17.4
LOS by Move:	C	D	C	D	C	B	D	C	B	C	D	B
HCM2kAvgQ:	1	17	4	12	9	1	3	5	1	2	14	8

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Newark-Dumbarton Rail SAP
2020 Analysis
Existing Plus Project PM Conditions with Mitigation

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Scenario Report

Scenario:	Cum With Pj_PM
Command:	Future _ WITH Project PM
Volume:	Cum_PM
Geometry:	CU_PM
Impact Fee:	Default Impact Fee
Trip Generation:	Project PM
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #3 Gateway Blvd. / Thornton Ave.

Cycle (sec):	65	Critical Vol./Cap.(X):	1.056
Loss Time (sec):	12	Average Delay (sec/veh):	38.8
Optimal Cycle:	180	Level Of Service:	D

Street Name:	Thornton Ave.						Gateway Blvd.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Protected			Split Phase			Split Phase		
Rights:	Ovl			Include			Include			Ovl		
Min. Green:	0	10	10	7	10	0	0	0	0	10	0	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0 0	2	1 0	2 0	1	0 0	0 0	0	0 0 0	1 0	0	0 2
Volume Module: >> Count Date: 17 May 2007 <<												
Base Vol:	0	550	60	420	1070	0	0	0	0	40	0	450
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	550	60	420	1070	0	0	0	0	40	0	450
Added Vol:	0	144	3	0	232	0	0	0	0	5	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	694	63	420	1302	0	0	0	0	45	0	450
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	694	63	420	1302	0	0	0	0	45	0	450
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	694	63	420	1302	0	0	0	0	45	0	450
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	694	63	420	1302	0	0	0	0	45	0	450
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.88	0.88	0.90	0.98	1.00	1.00	1.00	1.00	0.93	1.00	0.73
Lanes:	0.00	2.75	0.25	2.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	4604	418	3432	1862	0	0	0	0	1769	0	2786
Capacity Analysis Module:												
Vol/Sat:	0.00	0.15	0.15	0.12	0.70	0.00	0.00	0.00	0.00	0.03	0.00	0.16
Crit Moves:					****							****
Green Time:	0.0	10.0	20.0	33.0	43.0	0.0	0.0	0.0	0.0	10.0	0.0	43.0
Volume/Cap:	0.00	0.98	0.49	0.24	1.06	0.00	0.00	0.00	0.00	0.17	0.00	0.24
Delay/Veh:	0.0	54.8	18.6	9.0	53.2	0.0	0.0	0.0	0.0	24.2	0.0	4.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	54.8	18.6	9.0	53.2	0.0	0.0	0.0	0.0	24.2	0.0	4.5
LOS by Move:	A	D	B	A	D	A	A	A	A	C	A	A
HCM2kAvgQ:	0	6	4	2	37	0	0	0	0	1	0	2

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #7 Thornton Ave. / Willow St.

Cycle (sec):	115	Critical Vol./Cap.(X):	0.832
Loss Time (sec):	16	Average Delay (sec/veh):	41.5
Optimal Cycle:	OPTIMIZED	Level Of Service:	D

Street Name:	Willow St.						Thornton Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 1	0	0 1	1	0	0 1	0	1	0 1 1	0	1	0 0 1 0
Volume Module: >> Count Date: 17 May 2007 << 5:00-6:00 pm												
Base Vol:	120	10	130	20	10	10	50	830	260	20	560	30
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	120	10	130	20	10	10	50	830	260	20	560	30
Added Vol:	147	3	233	0	3	0	0	0	237	381	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	267	13	363	20	13	10	50	830	497	401	560	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	267	13	363	20	13	10	50	830	497	401	560	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	267	13	363	20	13	10	50	830	497	401	560	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	267	13	363	20	13	10	50	830	497	401	560	30
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.93	0.92	0.92	0.93	0.88	0.88	0.93	0.97	0.97
Lanes:	1.91	0.09	1.00	1.00	0.57	0.43	1.00	1.25	0.75	1.00	0.95	0.05
Final Sat.:	3388	165	1583	1769	984	757	1769	2089	1251	1769	1753	94
Capacity Analysis Module:												
Vol/Sat:	0.08	0.08	0.23	0.01	0.01	0.01	0.03	0.40	0.40	0.23	0.32	0.32
Crit Moves:	****			****			****			****		
Green Time:	10.0	10.0	38.7	10.0	10.0	10.0	12.6	50.3	50.3	28.7	66.4	66.4
Volume/Cap:	0.91	0.91	0.68	0.13	0.15	0.15	0.26	0.91	0.91	0.91	0.55	0.55
Delay/Veh:	80.6	80.6	36.4	48.9	49.0	49.0	47.6	38.8	38.8	64.2	15.8	15.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	80.6	80.6	36.4	48.9	49.0	49.0	47.6	38.8	38.8	64.2	15.8	15.8
LOS by Move:	F	F	D	D	D	D	D	D	D	E	B	B
HCM2kAvgQ:	8	8	12	1	1	1	2	25	25	17	13	13

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Note: Queue reported is the number of cars per lane.

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
FHWA Roundabout Method (Future Volume Alternative)

Intersection #14 Enterprise Dr / Willow St

Average Delay (sec/veh): 11.8 Level Of Service: B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Yield Sign			Yield Sign			Yield Sign			Yield Sign		
Lanes:	1			1			1			1		
Volume Module:												
Base Vol:	10	130	10	140	140	10	10	10	10	10	10	140
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	10	130	10	140	140	10	10	10	10	10	10	140
Added Vol:	142	127	42	127	168	327	192	17	91	21	8	64
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	152	257	52	267	308	337	202	27	101	31	18	204
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	152	257	52	267	308	337	202	27	101	31	18	204
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	257	52	267	308	337	202	27	101	31	18	204
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	152	257	52	267	308	337	202	27	101	31	18	204
PCE Module:												
AutoPCE:	152	257	52	267	308	337	202	27	101	31	18	204
TruckPCE:	0	0	0	0	0	0	0	0	0	0	0	0
ComboPCE:	0	0	0	0	0	0	0	0	0	0	0	0
BicyclePCE:	0	0	0	0	0	0	0	0	0	0	0	0
AdjVolume:	152	257	52	267	308	337	202	27	101	31	18	204

Delay Module: >> Time Period: 0.25 hours <<				
CircVolume:	496	201	606	611
MaxVolume:	932	1091	873	870
PedVolume:	0	0	0	0
AdjMaxVol:	932	1091	873	870
ApproachVol:	461	912	330	253
ApproachV/C:	0.49	0.84	0.38	0.29
ApproachDel:	7.6	17.4	6.6	5.8
ApproachLOS:	A	C	A	A
Queue:	2.8	10.4	1.8	1.2

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #17 Mowry Ave. / Cherry St.

Cycle (sec):	135	Critical Vol./Cap.(X):	1.339
Loss Time (sec):	16	Average Delay (sec/veh):	98.3
Optimal Cycle:	180	Level Of Service:	F

Street Name:	Cherry St.						Mowry Ave.					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Ovl			Ovl		
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0 2	0	1	2 0 2	0	1	1 0 1	0	1	2 0 0	1	1
Volume Module: >> Count Date: 3 Oct 2006 << 4:45-5:45 pm												
Base Vol:	50	850	710	730	920	90	100	220	60	230	170	940
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	50	850	710	730	920	90	100	220	60	230	170	940
Added Vol:	0	20	0	147	12	0	0	0	0	0	0	249
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	50	870	710	877	932	90	100	220	60	230	170	1189
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	870	710	877	932	90	100	220	60	230	170	1189
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	870	710	877	932	90	100	220	60	230	170	1189
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	870	710	877	932	90	100	220	60	230	170	1189
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.93	0.83	0.90	0.93	0.83	0.93	0.98	0.83	0.90	0.85	0.85
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	2.00	0.25	1.75
Final Sat.:	1769	3538	1583	3432	3538	1583	1769	1862	1583	3432	405	2831
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.45	0.26	0.26	0.06	0.06	0.12	0.04	0.07	0.42	0.42
Crit Moves:			****	****			****				****	
Green Time:	11.5	44.7	44.7	25.5	58.6	58.6	7.0	31.2	42.7	17.7	41.8	67.3
Volume/Cap:	0.33	0.74	1.35	1.35	0.61	0.13	1.09	0.51	0.12	0.51	1.35	0.84
Delay/Veh:	59.4	42.7	217.1	224.5	30.0	23.0	184.5	46.3	32.9	55.6	213	33.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	59.4	42.7	217.1	224.5	30.0	23.0	184.5	46.3	32.9	55.6	213	33.5
LOS by Move:	E	D	F	F	C	C	F	D	C	E	F	C
HCM2kAvgQ:	2	18	53	35	16	2	8	8	2	5	51	26

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Newark-Dumbarton Rail SAP
2020 Analysis
Future Year 2035 Base Plus Project PM

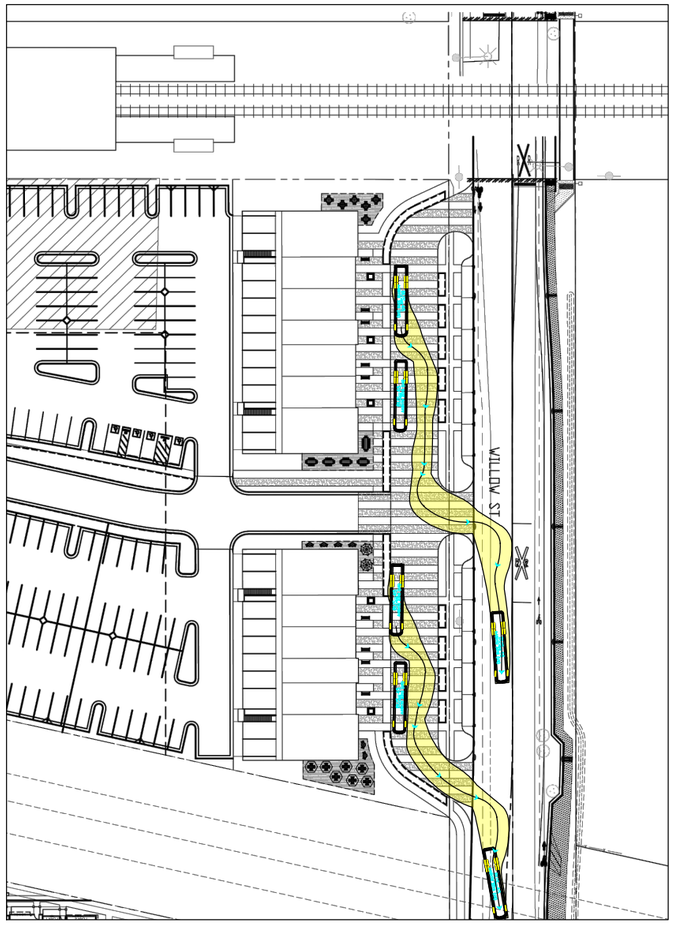
Note: Queue reported is the number of cars per lane.

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ATTACHMENT 3
BUS TURNING SIMULATION



INCOMING 45' BUSES



OUTGOING 45' BUSES

N

N.T.S.

CONCEPTUAL - NOT FOR CONSTRUCTION

Attachment 3
Willow and Grand Park Project, Newark
Bus Turning Simulation

CADD FILE: \\pwinc.local\Data-emt-oak\Oakland N Drive\Projects\2019\OK19-0325.00_Willow_Street_Mixed_Use\Graphics\AutoTURN\0325-AutoTURN.dwg
May 19, 2021

FEHR PEERS

MEMORANDUM

Date: February 28, 2022

To: Lesley Owning, HELIX Environmental Planning, Inc.

From: Rob Rees, Fehr & Peers

Subject: Enterprise Drive – Willow Street Mixed-Use Project

OK19-0325

This memorandum presents our findings for the Enterprise Drive cross section for the Willow Street Mixed-Use project. The review of Enterprise Drive cross section between Willow and Hickory Streets per request from the City of Newark and the development team is summarized below.

ROUNDABOUT ANALYSIS

Roundabout analysis is a process of evaluating intersection analysis for all movements during both AM and PM peak hour for a roundabout. The analysis for the roundabout at Enterprise Drive and Willow Street was performed using Sidra Intersection software (SIDRA) and the traffic volumes from Dumbarton TOD EIR. The study roundabout is currently operating with an eastbound right turn slip lane. **Table 1** summarizes the 2035 buildout cumulative turn movements at the study roundabout from the Dumbarton TOD EIR.

Table 1:
Turning Volumes at Enterprise Drive and Willow Street –
2035 Cumulative Buildout Forecasts

	Willow Street						Enterprise Drive					
Movement	**NBL**	**NBT**	**NBR**	**SBL**	**SBT**	**SBR**	**EBL**	**EBT**	**EBR**	**WBL**	**WBT**	**WBR**
AM	97	245	19	178	211	260	196	14	107	52	27	278
PM	110	218	52	267	255	247	281	27	114	31	18	204

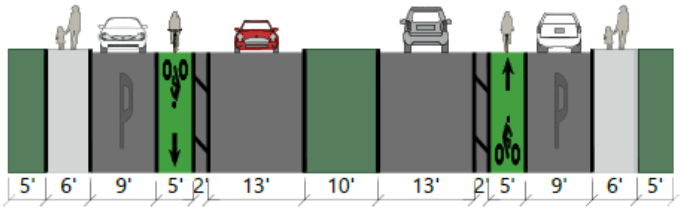
The cumulative traffic forecasts shown in Table 1 illustrate that the heaviest traffic flows are anticipated along the Willow Street corridor. The volumes in Table 1 were used to analyze if the roundabout at Enterprise Drive and Willow Street could operate as a single lane roundabout. SIDRA shows the results in level of service (LOS) and volume-to-capacity (v/c) ratio. The intersection will

operate with LOS B in the AM and LOS C in the PM. LOS B in the AM means the operation will experience minor delays with less then 15 seconds per vehicle. LOS C in the PM means the operation will experience moderate delays with less than 25 seconds per vehicle. The v/c ratio is 0.64 in the AM and 0.75 in the PM, which are under 0.85. Values under 0.85 typically represent conditions where the traffic network is serving the travel demand well. The SIDRA calculation worksheets are provided in **Attachment A** to this memorandum. The single lane roundabout operates well through Year 2035 and controls capacity to and from Enterprise Drive. As such, Enterprise Drive approaching the roundabout should be one lane in each direction to provide efficient vehicular movements approaching and departing the single lane roundabout.

RECOMMENDATIONS

This assessment results in the following recommendations:

- The roundabout at Enterprise Drive and Willow Street can be constructed as a single lane roundabout that will serve the travel demand well for 2035 buildout scenario with LOS B in the AM and LOS C in the PM.
- The Enterprise Drive cross section can be one lane in each direction consistent with the single lane roundabout. The recommended cross section is below.



ATTACHMENTS

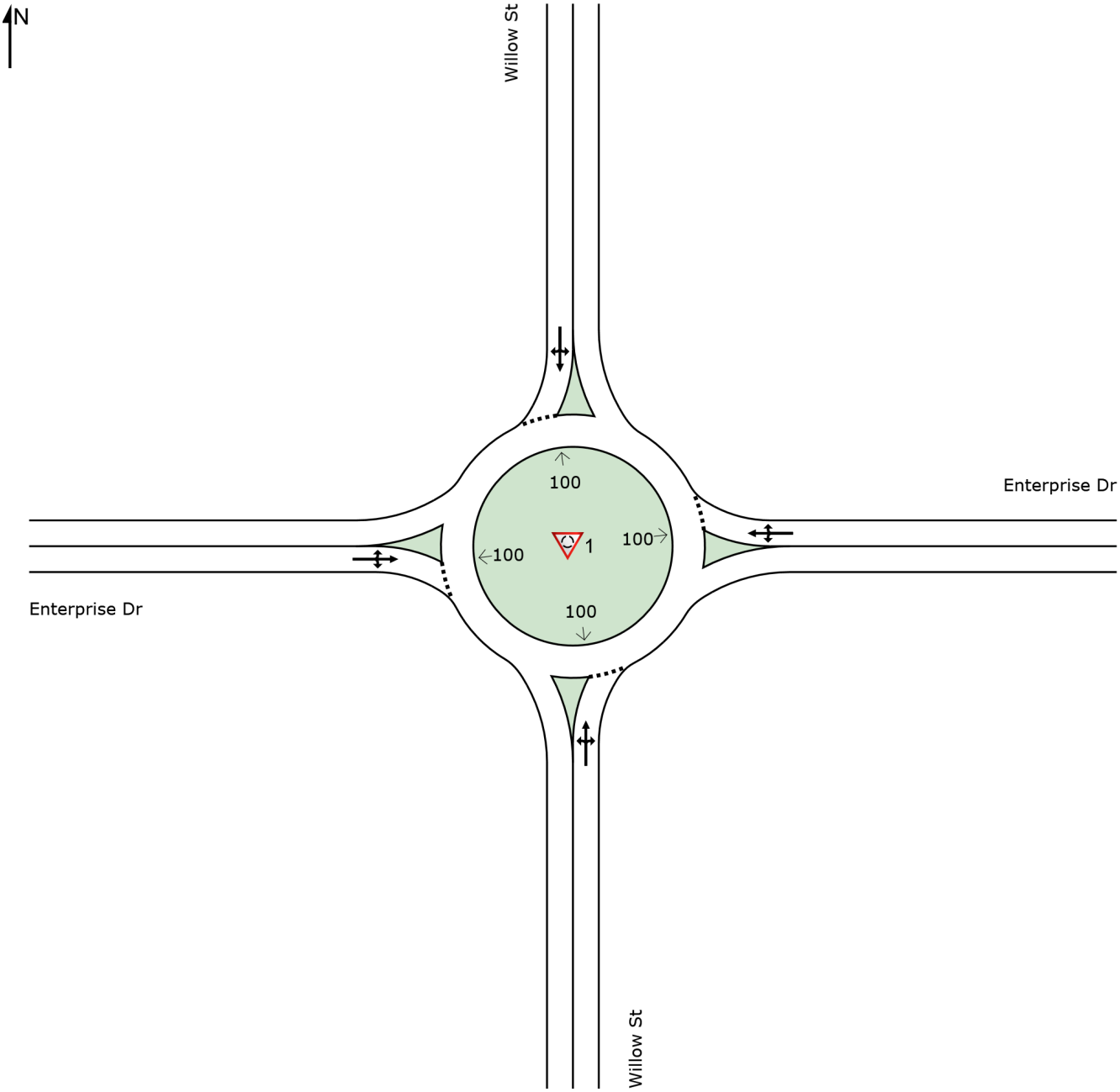
Attachment 1: Intersection Worksheets

SITE LAYOUT

Site: 1 [AM - Willow St & Enterprise Dr (Site Folder: General)]

Site Category: One Lane Roundabout
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: 1 [AM - Willow St & Enterprise Dr (Site Folder: General)]

Site Category: One Lane Roundabout
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Willow St														
3	L2	97	3.0	105	3.0	0.456	9.9	LOS A	2.9	73.2	0.66	0.67	0.78	27.0
8	T1	245	3.0	266	3.0	0.456	9.9	LOS A	2.9	73.2	0.66	0.67	0.78	24.0
18	R2	19	3.0	21	3.0	0.456	9.9	LOS A	2.9	73.2	0.66	0.67	0.78	24.4
Approach		361	3.0	392	3.0	0.456	9.9	LOS A	2.9	73.2	0.66	0.67	0.78	24.9
East: Enterprise Dr														
1	L2	52	3.0	57	3.0	0.536	13.2	LOS B	3.9	98.6	0.75	0.89	1.14	23.7
6	T1	27	3.0	29	3.0	0.536	13.2	LOS B	3.9	98.6	0.75	0.89	1.14	25.8
16	R2	278	3.0	302	3.0	0.536	13.2	LOS B	3.9	98.6	0.75	0.89	1.14	21.9
Approach		357	3.0	388	3.0	0.536	13.2	LOS B	3.9	98.6	0.75	0.89	1.14	22.5
North: Willow St														
7	L2	178	3.0	193	3.0	0.644	12.3	LOS B	6.7	170.6	0.65	0.53	0.75	23.4
4	T1	211	3.0	229	3.0	0.644	12.3	LOS B	6.7	170.6	0.65	0.53	0.75	22.2
14	R2	260	3.0	283	3.0	0.644	12.3	LOS B	6.7	170.6	0.65	0.53	0.75	23.8
Approach		649	3.0	705	3.0	0.644	12.3	LOS B	6.7	170.6	0.65	0.53	0.75	23.3
West: Enterprise Dr														
5	L2	196	3.0	213	3.0	0.426	9.8	LOS A	2.4	62.6	0.66	0.69	0.78	21.0
2	T1	14	3.0	15	3.0	0.426	9.8	LOS A	2.4	62.6	0.66	0.69	0.78	26.6
12	R2	107	3.0	116	3.0	0.426	9.8	LOS A	2.4	62.6	0.66	0.69	0.78	24.9
Approach		317	3.0	345	3.0	0.426	9.8	LOS A	2.4	62.6	0.66	0.69	0.78	22.5
All Vehicles		1684	3.0	1830	3.0	0.644	11.5	LOS B	6.7	170.6	0.68	0.67	0.84	23.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

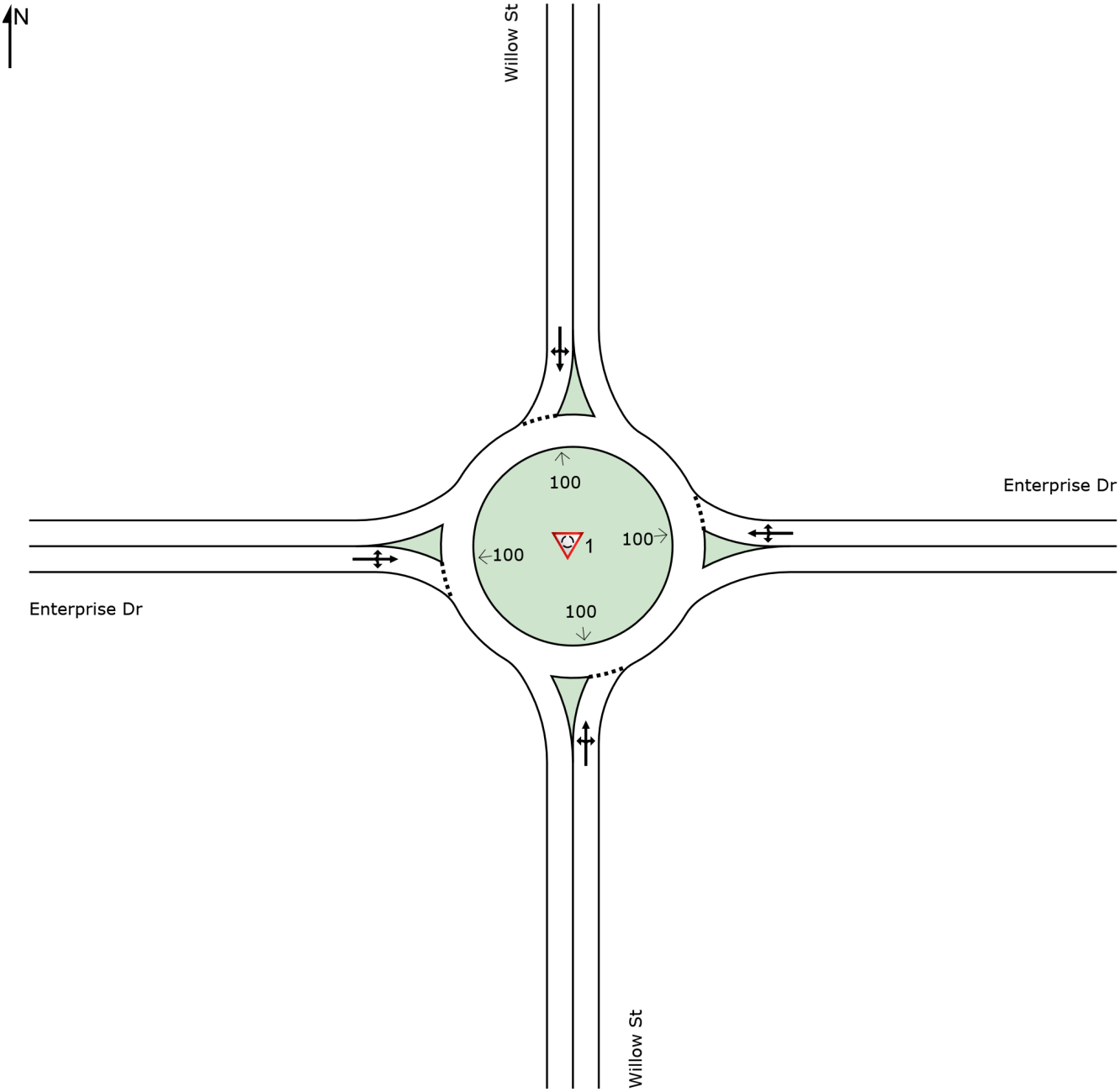
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SITE LAYOUT

Site: 1 [PM - Willow St & Enterprise Dr (Site Folder: General)]

Site Category: One Lane Roundabout
Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT SUMMARY

Site: 1 [PM - Willow St & Enterprise Dr (Site Folder: General)]

Site Category: One Lane Roundabout
Roundabout

Vehicle Movement Performance

Mov ID	Turn	INPUT VOLUMES [Total veh/h	HV] %	DEMAND FLOWS [Total veh/h	HV] %	Deg. Satn v/c	Aver. Delay sec	Level of Service	95% BACK OF QUEUE [Veh. veh	Dist] ft	Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed mph
South: Willow St														
3	L2	110	3.0	120	3.0	0.595	15.5	LOS C	4.7	120.5	0.79	0.97	1.32	23.9
8	T1	218	3.0	237	3.0	0.595	15.5	LOS C	4.7	120.5	0.79	0.97	1.32	20.7
18	R2	52	3.0	57	3.0	0.595	15.5	LOS C	4.7	120.5	0.79	0.97	1.32	21.5
Approach		380	3.0	413	3.0	0.595	15.5	LOS C	4.7	120.5	0.79	0.97	1.32	21.8
East: Enterprise Dr														
1	L2	31	3.0	34	3.0	0.412	11.2	LOS B	2.2	56.3	0.71	0.77	0.90	25.1
6	T1	18	3.0	20	3.0	0.412	11.2	LOS B	2.2	56.3	0.71	0.77	0.90	27.0
16	R2	204	3.0	222	3.0	0.412	11.2	LOS B	2.2	56.3	0.71	0.77	0.90	23.1
Approach		253	3.0	275	3.0	0.412	11.2	LOS B	2.2	56.3	0.71	0.77	0.90	23.7
North: Willow St														
7	L2	267	3.0	290	3.0	0.749	15.9	LOS C	13.9	355.8	0.76	0.72	1.08	21.4
4	T1	255	3.0	277	3.0	0.749	15.9	LOS C	13.9	355.8	0.76	0.72	1.08	20.2
14	R2	247	3.0	268	3.0	0.749	15.9	LOS C	13.9	355.8	0.76	0.72	1.08	22.0
Approach		769	3.0	836	3.0	0.749	15.9	LOS C	13.9	355.8	0.76	0.72	1.08	21.2
West: Enterprise Dr														
5	L2	281	3.0	305	3.0	0.644	17.0	LOS C	5.8	148.9	0.82	1.04	1.46	18.5
2	T1	27	3.0	29	3.0	0.644	17.0	LOS C	5.8	148.9	0.82	1.04	1.46	23.2
12	R2	114	3.0	124	3.0	0.644	17.0	LOS C	5.8	148.9	0.82	1.04	1.46	21.6
Approach		422	3.0	459	3.0	0.644	17.0	LOS C	5.8	148.9	0.82	1.04	1.46	19.6
All Vehicles		1824	3.0	1983	3.0	0.749	15.4	LOS C	13.9	355.8	0.77	0.85	1.19	21.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
Delay Model: HCM Delay Formula (Geometric Delay is not included).
Queue Model: HCM Queue Formula.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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FEHR PEERS

DRAFT MEMORANDUM

Date: May 26, 2022

To: Lesley Owning, HELIX Environmental Planning, Inc.

From: Rob Rees, Fehr & Peers

Subject: Trip Generation and Intersection Operations Analysis for Willow Street at G Street

OK19-0325

This memorandum presents the findings of the trip generation and intersection operations analysis prepared for the G Street intersection with Willow Street after buildout of the FMC Willow and Grand Park Project (formerly the Willow Street Mixed-Use Project) in Newark, CA.

PROJECT TRIP GENERATION

Proposed construction of the Project includes a new street, G Street, that would intersect with Willow Street and serve 64 market-rate townhomes, 91 affordable housing units, 3,600 square feet of retail space, and a bus transit station with 72 commuter parking spaces. The trip generation generated by these uses would use G Street to access Willow Street.

Trip generation is the process of estimating vehicles that would likely access the Project. Trip generation for the SP EIR was estimated using methods, formulas, and rates presented by Institute of Transportation Engineers (ITE) in the *Trip Generation Manual, 8th Edition*. To remain consistent with the SP EIR, Project trip generation was also estimated using the *Trip Generation Manual, 8th Edition*. Consistent with FMC Parcel C Project analysis, *Trip Generation Manual, 9th Edition* was used to estimate trip generation for land uses that were not evaluated in the SP EIR, except for the bus transit center, which used the *Trip Generation Manual, 10th Edition* because data was not available from earlier editions.

The proposed Project would be located less than a half-mile from the future Dumbarton Rail Transit Station, and it would construct the bus transit station element of the Rail Station. Considering the proximity of the Project to the future Dumbarton Rail Transit Station, some Project trips are likely to shift to transit. However, the future of the Dumbarton Rail line is uncertain due to funding

constraints. Therefore, as a reasonable worst-case scenario, no transit reductions were assumed in the trip generation estimates, which is consistent with the trip generation in the SP EIR.

Table 1 on the next page summarizes the trip generation for the Project elements that would use G Street. Since the Trip Generation Manual, 8th Edition does not differentiate between affordable housing and market-rate townhouses, this analysis combines them for 155 total residential units. Using the SP EIR internalization assumptions, the Project elements that use G Street is estimated to generate about 852 daily, 72 AM peak hour, and 83 PM peak hour external vehicle trips.

INTERSECTION OPERATIONS AND SIGNAL WARRANT ANALYSIS

Intersection operations were evaluated at the G Street intersection with Willow Street to assess intersection operations.

Vehicle trip generation for the uses that would use G Street is summarized in Table 1. Vehicle trips were distributed to the road network using the trip distribution percentages from the SP EIR, and the distributed trips were assigned to the study intersection based on paths of travel. The assigned trips were then added to the "Existing with SP Buildout" and "Cumulative (Year 2035) with SP Buildout" traffic forecasts based on the current planned SP buildout as evaluated in the November 19, 2021, memorandum titled, *Trip Generation and Intersection Operations Analysis – FMC Willow and Grand Park Project*.

Attachment 1 provides the intersection analysis worksheets and the peak hour signal warrant worksheets. With buildout of the current specific plan the G Street intersection with Willow Street would operate as follows.

Intersection Level of Service – G Street at Willow Street
(Side Street Stop Control Operations)

Study Scenario	AM Peak Hour		PM Peak Hour		Peak Hour Signal Warrant Met (Yes / No)?
	Level of Service	Delay	Level of Service	Delay	
Existing Plus Project	D	25.0	F	54.1	No
Cumulative 2035 Plus Project	D	31.9	E	47.2	No

Notes: Intersection LOS and Delay represents the operations for the side-street stop control movements on G Street turning onto Willow Street because this traffic must stop before proceeding. Willow Street traffic does not stop and so its LOS would be "A".
Source: ITE *Highway Capacity Manual,* 6th Edition; Fehr & Peers, 2022.

Level of Service E and F conditions occur during the PM peak hours when the traffic loads on Willow Street are greatest, and so it is more difficult to turn onto Willow Street from G Street.

The G Street intersection with Willow Street was reviewed for the Peak Hour Traffic Signal Warrants (worksheets in Attachment 1). The peak hour warrant is not met because G Street traffic volumes are substantially lower than the minimum threshold for signalization. However, it is likely that the peak hour warrant for signalization will be met once the rail station traffic is added to the G Street corridor. The analysis in this memorandum assumes a bus transit station but not a rail station. Only the peak hour warrant was considered for this memorandum. Prior to signalization in the future after the project is constructed the full complement of signal warrants should be considered to determine if a traffic signal should be installed.

ATTACHMENTS

Attachment 1: Intersection Analysis Worksheets and Peak Hour Signal Warrant Worksheets

Table 1
FMC Willow and Grand Park Project Trip Generation for Uses Served by G Street

Land Use	Units[1]	ITE Code	Daily	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
New Uses (Served by G Street)									
Retail[2]	3.6 KSF	820	155	2	2	4	7	6	13
Townhomes/Apartments (including 91 Affordable Units)[3]	155 DU	230	680	8	37	45	36	18	54
Bus Transit Station[5]	72 PS	90	202	21	9	30	9	22	31
Total Project Trips using G Street			1,037	31	48	79	52	46	98
Reductions									
Retail Internalization (-80%)[6]			-124	-2	-1	-3	-6	-4	-10
Townhomes/Apart Internalization (-9%)[6]			-61	-1	-3	-4	-3	-2	-5
Total Internalization (-80% retail, -9% residential)[6]			-185	-3	-4	-7	-9	-6	-15
Net External Project Trips Using G Street			**852**	**28**	**44**	**72**	**43**	**40**	**83**

1. KSF = 1,000 square feet, DU = dwelling units
2. Based on the *Dumbarton Transit Oriented Development Specific Plan Final Environmental Impact Report* (RBF, May 2011):
   Daily: T = 42.94 * (X);
   AM Peak Hour: T = 1 * (X) (61% in, 39% out);
   PM Peak Hour: T = 3.37 * (X) (49% in, 51% out)
3. Based on the *Dumbarton Transit Oriented Development Specific Plan Final Environmental Impact Report* (RBF, May 2011):
   Daily: T = 4.39 * (X);
   AM Peak Hour: T = 0.29 * (X) (17% in, 83% out);
   PM Peak Hour: T = 0.35 * (X) (67% in, 33% out)
4. ITE Trip Generation (8th Edition) land use category 412 (County Park):
   Daily: T = 2.28 * (X);
   AM Peak Hour: T = 0.01 * (X) (80% in, 20% out);
   PM Peak Hour: T = 0.06 * (X) 41% in, 59% out)
5. ITE Trip Generation (10th Edition) land use category 090 (Park and Ride Lot with Bus or Light Rail)
   Daily: T = 2.81 * (X);
   AM Peak Hour: T = 0.42 * (X) (69% in, 31% out);
   PM Peak Hour: T = 0.43 * (X) (28% in, 72% out)
6. As in the SP EIR, 9% of the residential trips and 80% of the commercial trips would be internal to the Specific Plan Area.

Sources: ITE *Trip Generation Manual*, 8th Edition; ITE *Trip Generation Manual,* 10th Edition; Fehr & Peers, 2021.

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	14	10	729	465	18
Future Vol, veh/h	30	14	10	729	465	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	15	11	792	505	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1329	515	525	0	-	0
Stage 1	515	-	-	-	-	-
Stage 2	814	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	171	560	1042	-	-	-
Stage 1	600	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	169	560	1042	-	-	-
Mov Cap-2 Maneuver	169	-	-	-	-	-
Stage 1	593	-	-	-	-	-
Stage 2	436	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25	0.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1042	-	169	560	-	-
HCM Lane V/C Ratio	0.01	-	0.193	0.027	-	-
HCM Control Delay (s)	8.5	-	31.3	11.6	-	-
HCM Lane LOS	A	-	D	B	-	-
HCM 95th %tile Q(veh)	0	-	0.7	0.1	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	12	14	674	946	29
Future Vol, veh/h	28	12	14	674	946	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	13	15	733	1028	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1807	1044	1060	0	-	0
Stage 1	1044	-	-	-	-	-
Stage 2	763	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	87	278	657	-	-	-
Stage 1	339	-	-	-	-	-
Stage 2	460	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	85	278	657	-	-	-
Mov Cap-2 Maneuver	85	-	-	-	-	-
Stage 1	331	-	-	-	-	-
Stage 2	460	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	54.1	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	657	-	85	278	-	-
HCM Lane V/C Ratio	0.023	-	0.358	0.047	-	-
HCM Control Delay (s)	10.6	-	69.3	18.6	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.4	0.1	-	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	30	14	10	823	536	18
Future Vol, veh/h	30	14	10	823	536	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	33	15	11	895	583	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1510	593	603	0	-	0
Stage 1	593	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	133	506	975	-	-	-
Stage 1	552	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	132	506	975	-	-	-
Mov Cap-2 Maneuver	132	-	-	-	-	-
Stage 1	546	-	-	-	-	-
Stage 2	390	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.9	0.1	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	975	-	132	506	-	-
HCM Lane V/C Ratio	0.011	-	0.247	0.03	-	-
HCM Control Delay (s)	8.7	-	41	12.3	-	-
HCM Lane LOS	A	-	E	B	-	-
HCM 95th %tile Q(veh)	0	-	0.9	0.1	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	28	12	14	649	900	29
Future Vol, veh/h	28	12	14	649	900	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	30	13	15	705	978	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1729	994	1010	0	-	0
Stage 1	994	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	97	297	686	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	474	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	95	297	686	-	-	-
Mov Cap-2 Maneuver	95	-	-	-	-	-
Stage 1	350	-	-	-	-	-
Stage 2	474	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	47.2	0.2	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	686	-	95	297	-	-
HCM Lane V/C Ratio	0.022	-	0.32	0.044	-	-
HCM Control Delay (s)	10.4	-	59.8	17.7	-	-
HCM Lane LOS	B	-	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	0.1	-	-

FEHR PEERS

Major Street	Willow Street
Minor Street	G Street

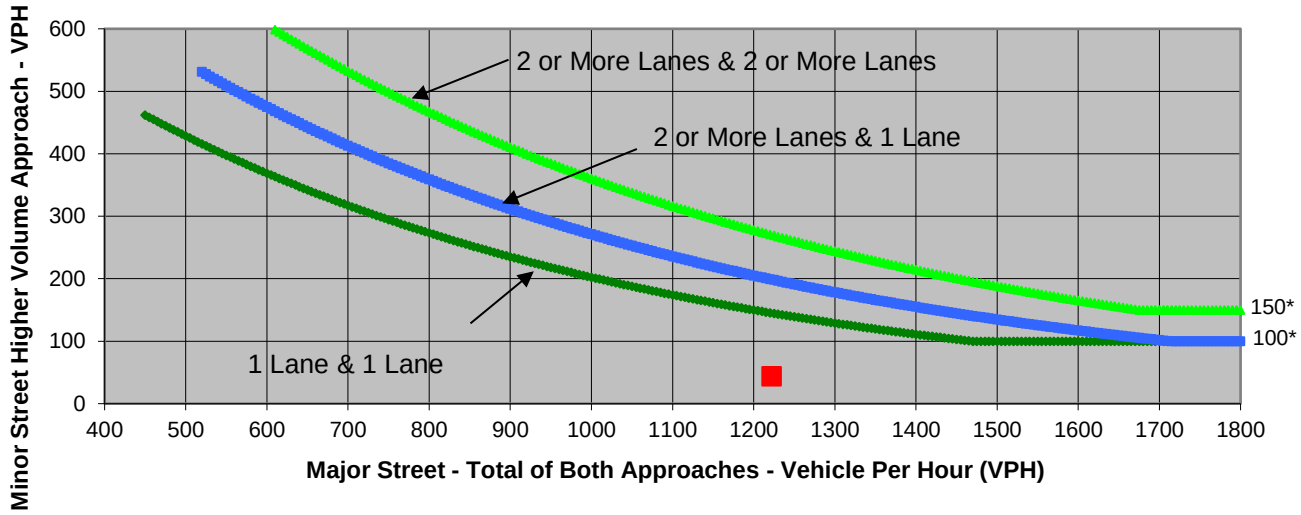
Project	FMC Willow & Grand Park
Scenario	Existing Plus Project
Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	30	0
Through	729	465	0	0
Right	0	18	14	0
Total	739	483	44	0

Major Street Direction

X	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Willow Street	G Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,222**	**44**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	FMC Willow & Grand Park
Scenario	Existing Plus Project
Peak Hour	AM

Major Street	Willow Street
Minor Street	G Street

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	30	0
Through	729	465	0	0
Right	0	18	14	0
Total	739	483	44	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	54
Approach with Worst Case Delay	EB
Total Vehicles on Approach	44

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing Plus Project	**0.7**	**44**	**1,266**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

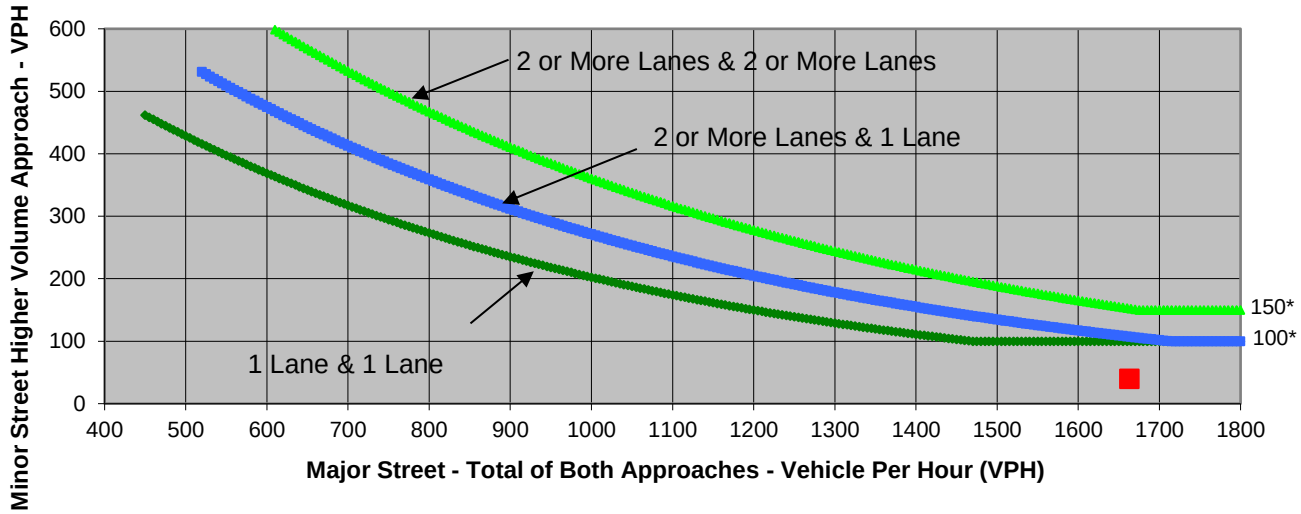
Major Street	Willow Street	Project	FMC Willow & Grand Park
Minor Street	G Street	Scenario	Existing Plus Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	14	0	28	0
Through	674	946	0	0
Right	0	29	12	0
Total	688	975	40	0

Major Street Direction

X	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Willow Street	G Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,663**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	FMC Willow & Grand Park
Scenario	Existing Plus Project
Peak Hour	PM

Major Street	Willow Street
Minor Street	G Street

Turn Movement Volumes

	NB	SB	EB	WB
Left	14	0	28	0
Through	674	946	0	0
Right	0	29	12	0
Total	688	975	40	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	0
Approach with Worst Case Delay	0
Total Vehicles on Approach	#N/A

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
Existing Plus Project	**#N/A**	**40**	**1,703**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**#N/A**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

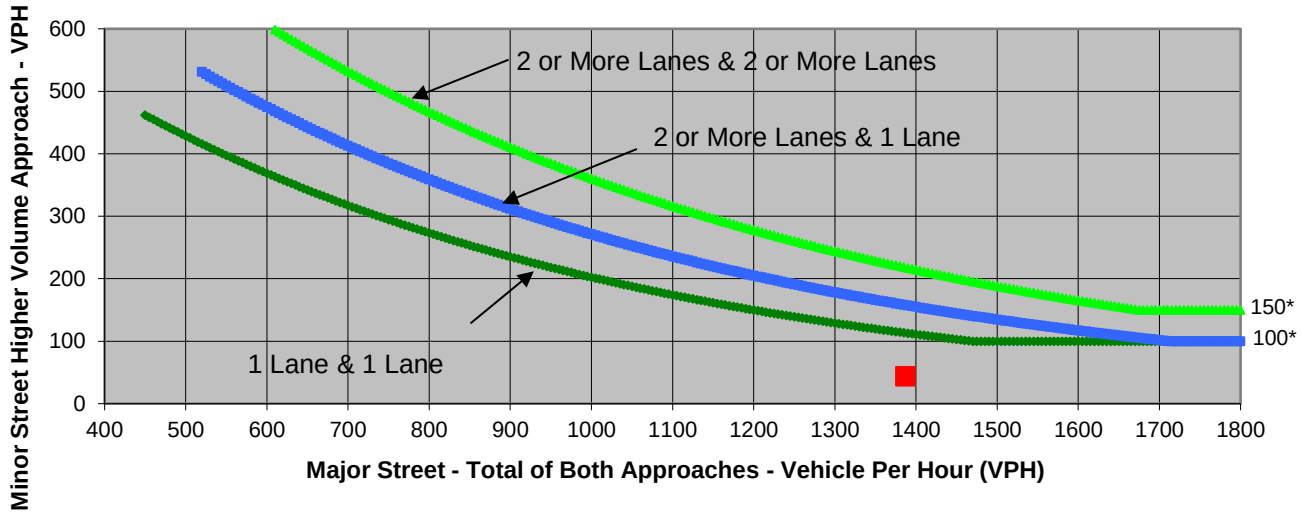
Major Street	Willow Street	Project	FMC Willow & Grand Park
Minor Street	G Street	Scenario	2035 Plus Project
		Peak Hour	AM

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	30	0
Through	823	536	0	0
Right	0	18	14	0
Total	833	554	44	0

Major Street Direction

X	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Willow Street	G Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,387**	**44**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	FMC Willow & Grand Park
Scenario	2035 Plus Project
Peak Hour	AM
Major Street	Willow Street
Minor Street	G Street

Turn Movement Volumes

	NB	SB	EB	WB
Left	10	0	30	0
Through	823	536	0	0
Right	0	18	14	0
Total	833	554	44	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	47
Approach with Worst Case Delay	EB
Total Vehicles on Approach	44

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
2035 Plus Project	**0.6**	**44**	**1,431**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

FEHR PEERS

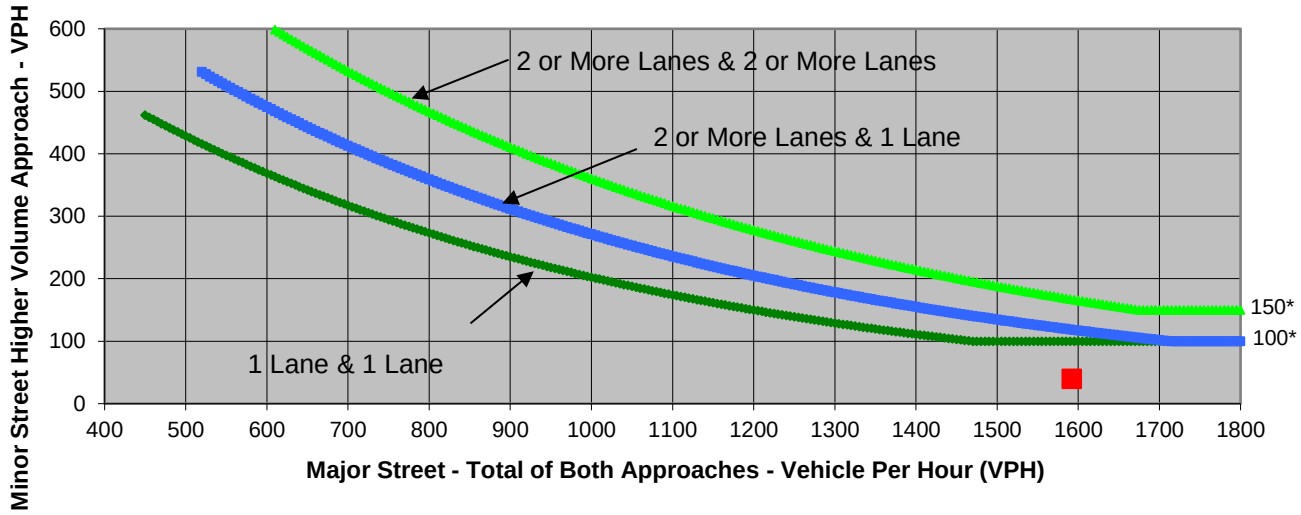
Major Street	Willow Street	Project	FMC Willow & Grand Park
Minor Street	G Street	Scenario	2035 Plus Project
		Peak Hour	PM

Turn Movement Volumes

	NB	SB	EB	WB
Left	14	0	28	0
Through	649	900	0	0
Right	0	29	12	0
Total	663	929	40	0

Major Street Direction

X	North/South
	East/West



* Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Source: *California Manual on Uniform Traffic Control Devices*, Caltrans, 2014

	Major Street	Minor Street	Warrant Met
	Willow Street	G Street	
Number of Approach Lanes	**1**	**1**	**NO**
Traffic Volume (VPH) *	**1,592**	**40**	

* Note: Traffic Volume for Major Street is Total Volume of Both Approches.
Traffic Volume for Minor Street is the Volume of High Volume Approach.

FEHR PEERS

Project	FMC Willow & Grand Park
Scenario	2035 Plus Project
Peak Hour	PM
Major Street	Willow Street
Minor Street	G Street

Turn Movement Volumes

	NB	SB	EB	WB
Left	14	0	28	0
Through	649	900	0	0
Right	0	29	12	0
Total	663	929	40	0

Major Street Direction

X	North/South
	East/West

Intersection Geometry

Number of Approach Lanes for Minor Street	1
Total Approaches	3

Worst Case Delay for Minor Street

Stopped Delay (seconds per vehicle)	25
Approach with Worst Case Delay	EB
Total Vehicles on Approach	40

Warrant 3A, Peak Hour			
	Peak Hour Delay on Minor Approach (vehicle-hours)	**Peak Hour Volume on Minor Approach (vph)**	**Peak Hour Entering Volume Serviced (vph)**
2035 Plus Project	**0.3**	**40**	**1,632**
Limiting Value	**4**	**100**	**650**
Condition Satisfied?	**Not Met**	**Not Met**	**Met**
Warrant Met	**NO**		

ORDINANCE NO. ___

ORDINANCE OF THE CITY COUNCIL OF THE CITY OF NEWARK AMENDING THE OFFICIAL ZONING MAP ESTABLISHED PURSUANT TO TITLE 17 (ZONING) AND SECTION 17.03.020 OF THE NEWARK ZONING ORDINANCE BY REZONING ALL THAT REAL PROPERTY SHOWN ON THE VESTING TENTATIVE MAP 8559 FROM BUSINESS AND TECHNOLOGY PARK (BTP) AND PARK (PK) TO MEDIUM DENSITY RESIDENTIAL WITH FORM BASED CODE (RM-FBC), COMMERCIAL MIXED USE WITH FORM BASED CODE (CMU-FBC), TRANSIT STATION (TS), PUBLIC FACILITIES (PF), AND PARK (PK)

WHEREAS, Willow Project Owner, LLC ("Applicant") submitted applications for a General Plan Amendment, Zoning Map Amendment, Specific Plan Amendment, Design Review, Minor Use Permit, Density Bonus, Park Agreement Amendment, Alternative Means of Compliance to Payment of Housing Impact Fee, Vesting Tentative Map, and an Addendum to the Dumbarton Transit Oriented Development Specific Plan Environmental Impact Report with the City of Newark to allow phased residential and commercial development at 8787 Enterprise Drive (APNs 537-0852-001-08, 537-0852-002-09, & 092-0100-005) (the "Project"); and

WHEREAS, in accordance with the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.; "CEQA") and sections 15162 and 15164 of the CEQA Guidelines, an initial study and addendum (collectively, "Addendum") was prepared for the Project which determined that the Project does not result in any new significant impacts or change the conclusions contained in the Environmental Impact Report for the Dumbarton Transit-Oriented Development Specific Plan (SCH 2010042012); and

WHEREAS, a component of the Project is an amendment to Title 17 (Zoning) of the Newark Zoning Ordinance and the Official Zoning Map, to rezone property described as follows:

From Business and Technology Park (BTP) and Park (PK) to Medium Density with Form Based Code (RM-FBC), Commercial Mixed Use with Form Based Code (CMU-FBC), Transit Station (TS), Public Facilities (PF), and Park (PK); and

WHEREAS, Exhibit A to this Ordinance depicts the affected portions of real property proposed for re-zoning as shown on Vesting Tentative Tract Map 8559 in the City of Newark, County of Alameda; and

WHEREAS, as described fully in section IV of the Findings of Determinations for the Project attached hereto as Exhibit B and incorporated herein, the City Council finds that the Ordinance meets the following criteria required by Newark Municipal Code section 17.39.080:

a. The amendments are consistent with the General Plan;

b. Any change in district boundaries is necessary to achieve the balance of land uses desired by the City, consistent with the General Plan, and to increase the inventory of land within a given zoning district; and

c. The amendments will promote the growth of the City in an orderly manner and promote and protect the public health, safety, peace, comfort and general welfare; and

WHEREAS, pursuant to Newark Zoning Ordinance Section 17.39.050.C, a public hearing notice was published in the Tri-City Voice on July 12, 2022, and mailed as required, and the Planning Commission held a public hearing to consider the Ordinance at 7:00 p.m. on July 12, 2022 at the City Administration Building, 37101 Newark Boulevard, Newark, California, and the Planning Commission voted 4-0 (1 absence) to recommend that the City Council adopt the Ordinance; and

WHEREAS, pursuant to Newark Zoning Ordinance Section 17.39.050.C, a public hearing notice was published in the Tri-City Voice on August 23, 2022, and mailed as required, and the City Council held a public hearing to consider the Ordinance on September 8, 2022 and September 22, 2022 at 7:00 p.m. at the City Administration Building, 37101 Newark Boulevard, Newark, California.

The City Council of the City of Newark does ordain as follows:

Section 1: The above recitals are true and correct and are incorporated herein.

Section 2: Based on the substantial evidence set forth in the record, the City Council of the City of Newark finds that the Addendum adequately evaluates potential environmental impacts of the Project, including the rezonings in this Ordinance, consistent with the requirements of CEQA and the CEQA Guidelines. The applicable mitigation measures identified in the Specific Plan EIR would ensure that any potential environmental impacts of the Project would be reduced to less than significant levels. The impacts identified in the Specific Plan EIR as significant and unavoidable remain significant and unavoidable but the Project does not increase those previously identified impacts in their severity. No new mitigation measures are required to mitigate environmental impacts associated with the Project. Therefore, the Addendum supports the City's consideration of the Project, as outlined in the State CEQA Guidelines Section 15162 and 15164.

Section 3: Pursuant to Section 17.39.080 of the City of Newark Zoning Ordinance, the City Council of the City of Newark does hereby make the Findings and Determinations attached hereto as Exhibit B and incorporated herein, including specifically the findings contained in section IV, which support the zoning map amendments in this Ordinance. The City Council further finds that the that this Ordinance is necessary and desirable to achieve the purposes of Title 17 (Zoning) of the Newark Zoning Ordinance; is consistent with the policies, goals, and objectives of the General Plan; and promotes the public health, safety, morals, comfort, convenience, and general welfare of the residents of the City of Newark.

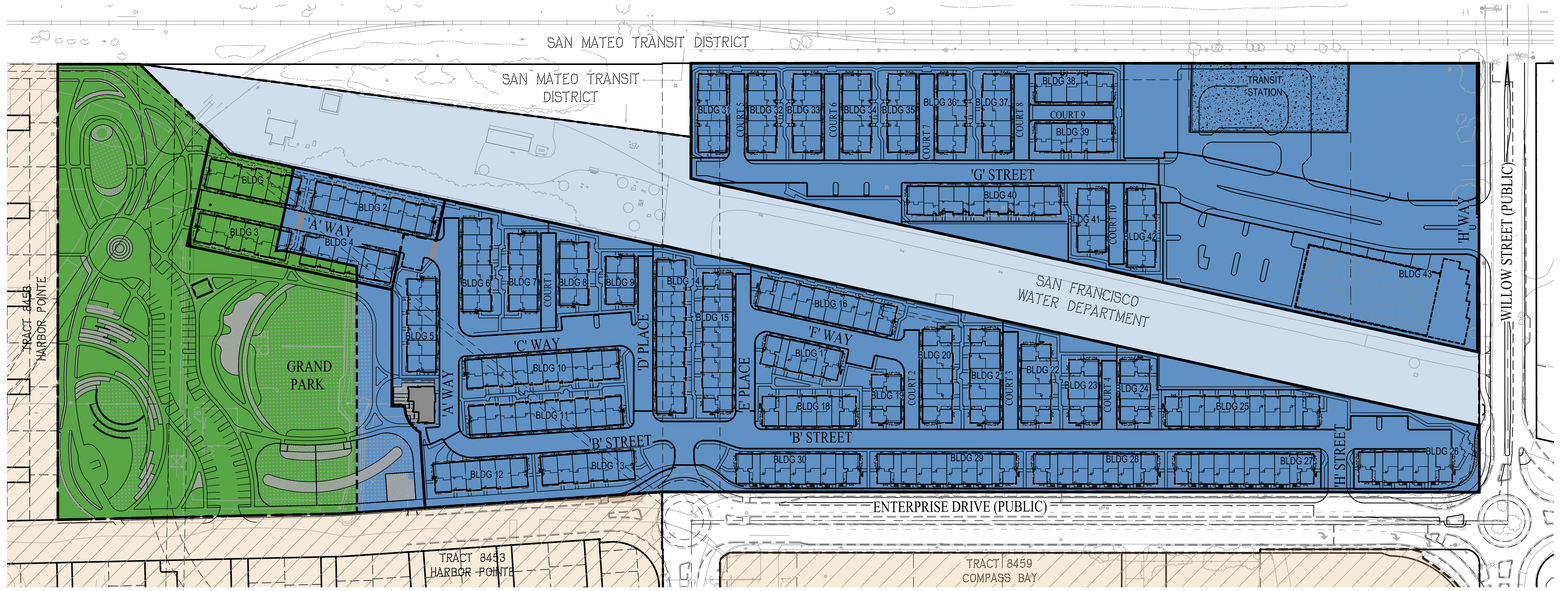
Section 4: The City's Official Zoning Map established pursuant to Title 17 (Zoning) and Section 17.03.020 of the Newark Zoning Ordinance is hereby amended by rezoning and

redistricting the territory in the City of Newark, County of Alameda, State of California as shown on Exhibit A attached to this Ordinance, which is incorporated herein.

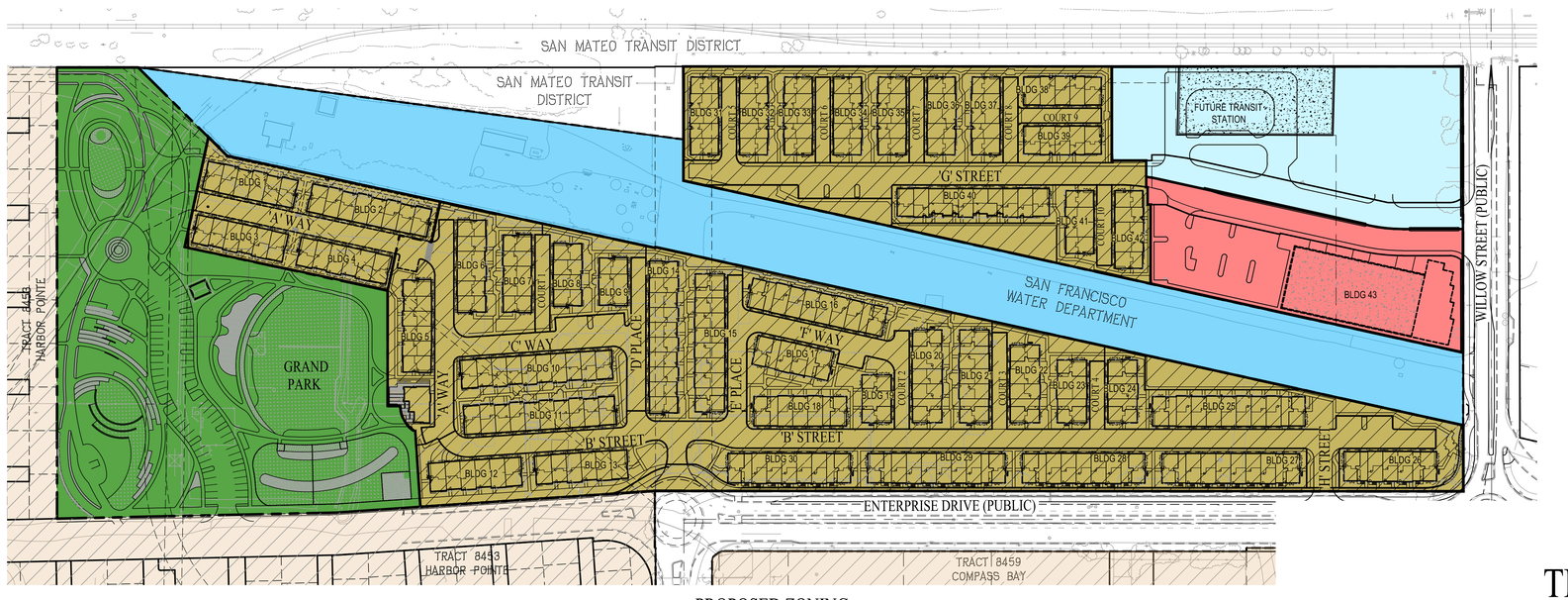
Section 5. If any section, subsection, subdivision, paragraph, sentence, clause, or phrase of this Ordinance, or any part thereof, is for any reason held to be invalid, such decision shall not affect the validity of the remaining portions of this Ordinance or any part thereof. The City Council hereby declares that it would have passed the remainder of this Ordinance, if such invalid portion thereof had been deleted.

Section 6: Effective Date. This ordinance shall take effect thirty (30) days from the date of its passage. Before expiration of fifteen (15) days after its passage, this ordinance shall be published in The Argus, a newspaper of general circulation published and printed in the County of Alameda and circulated in the City of Newark.

Exhibit A: Zoning Map Amendment for real property shown on Vesting Tentative Tract Map 8559
Exhibit B: Findings of Determinations for the FMC Willow Project



CURRENT APPROVED ZONING



PROPOSED ZONING

ZONING AMENDMENT SUMMARY

ZONING DISTRICT	CURRENT ZONING	PROPOSED ZONING	PROPOSED ZONING CHANGE
RESIDENTIAL MEDIUM DENSITY WITH FORM BASED CODE (RM)	0.00 AC	13.35 AC±	13.35 AC±
COMMERCIAL MIXED USE WITH FORM BASED CODE (CMU-FBC)	0.00 AC	1.60 AC±	1.60 AC±
BUSINESS TECHNOLOGY PARK (BTP)	17.10 AC±	0.00 AC	(17.10) AC±
TRANSIT STATION (TS)	0.00 AC	2.10 AC±	2.10 AC±
PARK (PK)	5.00 AC±	5.05 AC±	0.05 AC±
TOTAL	**22.1 AC±**	**22.1 AC±**	**0.0 AC**

LEGEND

- RESIDENTIAL MEDIUM DENSITY WITH FORM BASED CODE (RM)
- COMMERCIAL MIXED USE WITH FORM BASED CODE (CMU-FBC)
- PARKS (PF)
- BUSINESS AND TECHNOLOGY PARK (BTP)
- PUBLIC FACILITIES (PF)
- TRANSIT STATION (TS)

TRACT 8559
ZONING CHANGES
FMC WILLOW

CITY OF NEWARK ALAMEDA COUNTY CALIFORNIA

SCALE: 1"=100' DATE: JULY 5, 2022

0 100 200 300

cbg CIVIL ENGINEERS ▪ SURVEYORS ▪ PLANNERS
SAN RAMON ▪ (925) 866-0322
SACRAMENTO ▪ (916) 375-1877
WWW.CBANDG.COM

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I. California Environmental Quality Act Determination (Cal. Public Resources Code Section 21000, et. seq.)

The Dumbarton TOD Specific Plan was adopted after certification of a full environmental impact report.

The City of Newark (City) certified a Program Environmental Impact Report (PEIR) for the Bayside Newark Transit Oriented Development (TOD) Specific Plan (Specific Plan), formerly known as the Dumbarton TOD Specific Plan (State Clearinghouse No. 2010042012, July 2011). The City required preparation of an Initial Study (IS) to determine whether those changes to the FMC Willow and Grand Park project would result in any new or more substantial impacts from those identified in the prior adopted 2011 PEIR. Generally, the project's increased residential density replaces existing commercial and office. The IS concludes, based upon substantial evidence, that the proposed FMC Willow and Grand Park project is similar to the project evaluated in the adopted 2011 PEIR and would not cause any new or more severe impacts not previously addressed. Similar to the approved project, the proposed project involves the construction of a commercial/mixed-use and residential development, with a future transit station and recreational open space. As supported in the analysis contained in the accompanying IS, there are no substantial changes proposed in the FMC Willow and Grand Park project which would result in any new significant environmental effects or a substantial increase in the severity of significant effects previously identified in the 2011 PEIR. There is no new information of substantial importance which was not known for the 2011 PEIR, and no new mitigation measures are necessitated by new impacts. Therefore, under CEQA Guidelines 15162 and 15164, no further environmental analysis is required as none of the circumstances in Section 15162 exist and the City finds that an addendum to the 2011 PEIR is appropriate for the project. The IS and addendum (together the "IS/Addendum") is incorporated into these findings by reference.

II. General Plan Amendment

Pursuant to Newark Municipal Code Chapter 17.38, the City finds as follows:

A. *Reasons for the recommendation* - The General Plan Amendment is required to allow the proposed change in uses permitted on the 22.1 acre Project Site, and ensure consistency with the concurrently approved Bayside Newark TOD Specific Plan ("Specific Plan") Amendment and Rezoning, by amending the General Plan land use map to designate the Project Site with Medium Density Residential, Commercial Mixed Use, Public Institutional, and Parks and Recreation Facilities land use designations, a change from the existing Community Commercial, High Density Residential, Parks and Recreational Facilities, and Public Institutional designations.

B. *Findings related to supporting the recommendation-*

1. The request for the General Plan Amendment is consistent with the requirements and procedures set forth in the General Plan and Specific Plan;

2. The proposed Project (specifically including the General Plan Amendment, Specific Plan Amendment, Rezoning, Design Review, Minor Use Permit, Vesting Tentative Tract Map No.

8559, and Affordable Housing-Alternative Means of Compliance to Payment of Housing Impact Fee) is consistent with the General Plan, including the following General Plan policies:

Policy LU-1.1 Balance of Uses. Maintain a reasonable balance of land uses in the city so that residents can live close to where they work and satisfy their shopping, educational, personal, health, entertainment, and recreational needs close to home. The Project would result in the development of market rate and affordable housing adjacent to retail and recreational uses, as well as a future transit station.

Policy LU-1.2 Growth Focus Areas. Achieve a future growth pattern which includes new neighborhoods on vacant land along the southern and western edges of the city, and infill development in transit-served areas such as Old Town and the Greater NewPark Mall Area. Zoning and development review decisions should recognize these areas as the priority locations for growth and change over the next 20 years. The Project would redevelop vacant, blighted former industrial sites on the western edge of the City with 279 market rate residential units, 90 affordable housing units, retail uses and parks/recreational uses.

Policy LU-1.4 Coordinating Land Use and Transportation Decisions. Coordinate land use and development decisions with the capacity of the transportation system and plans for future transportation improvements. The Project would develop residential and retail uses adjacent to, and reserve property for, a future transit station. As part of the Project, the applicant is dedicating the property for the future transit station.

Policy LU-1.6 Strengthening the Retail Base. Diversify the retail base of the city to create jobs, generate tax revenue to support City services, and enable residents and workers to find the goods and services they need without leaving Newark. The Project would develop retail uses on an underutilized, former industrial vacant site, increasing tax revenue.

Policy LU-1.8 Housing Opportunity Sites. Ensure that adequate sites are provided for the private and non-profit sectors to develop housing for seniors, persons with disabilities, and lower income households. Such housing should be well designed and managed, and located in a manner that is compatible with existing uses and neighborhood character. The Project would develop 90 high quality affordable housing units, which will be professionally managed along with the 279 market rate townhome units proposed by the Project, as a 370-unit mixed use community.

Policy LU-1.9 Park and Recreation Expansion. Expand park and recreational lands and facilities to keep pace with population growth and support the leisure time needs of Newark residents. The Project would include a five-acre community park (Grand Park), as well as a 1,485 square foot community building.

Policy LU-1.10 Vacant and Underutilized Sites. Encourage the development of Newark's remaining vacant and underutilized sites for their highest and best use, consistent with the designations shown on the General Plan Diagram. Future growth in the city should generally be directed to the areas identified in this General Plan. The Project would redevelop vacant, blighted former industrial sites on the western edge of the City with 279 market rate residential units, 90 affordable housing units, retail uses and parks/recreational uses.

Policy LU-1.15 Mixed-Use. Provide opportunities for development combining residential and commercial uses (e.g. "mixed-use" development) in areas where the impacts of one land use on the other and the impacts on nearby neighborhoods can be sufficiently mitigated. The Project would redevelop vacant, blighted former industrial sites with a mixed used residential community that incorporates commercial/retail uses as part of the Project.

Policy LU-2.3 High-Quality Development. Maintain standards for medium-density, high-density, and mixed-use development that ensure high quality development and adequate buffering and screening from nearby lower density uses. The Project would comply with the Specific Plan's design guidelines and all the other standards imposed by the Design Review to ensure high quality development and adequate buffering, as applicable. The project will be buffered to the west by a 5-acre grand park. The bay trail corridor along Enterprise Drive will include a 7-foot landscape strip with tree planting and a 12-foot concrete pedestrian trail. Along the north side of the project is the Sam Trans right of way where a soundwall will be constructed along the property line. The east side of the project adjacent to Willow Street will include the future transit station site and the mixed-use parcel.

Policy LU-2.7 Design Guidelines. Maintain design guidelines and a design review process that applies to building and site design throughout the city. The Project would comply with the Bayside Newark Specific Plan's design guidelines and all the other standards imposed by the City's Design Review approval. Architecture will feature high quality materials such as stone/brick veneer, lap siding metal railings, awnings, and metal-look roofing, and fiber cement finishes. Landscaping will feature a blend of low maintenance, drought tolerant, and California native trees, shrubs, grasses and perennials

Policy LU-2.8 Relating Density to Transit Service. Allow higher residential densities in areas with more frequent and reliable public transit service, and ensure that public transit services are expanded in areas where growth is projected. The Project would develop higher density residential in the area surrounding the future transit station specifically, 79.1 du/ac at the commercial mixed/use site and 21.4 du/ac for the residential area and would dedicate a 1.8 net acre site to the City to be used for expanded transit services.

Policy LU-4.3 Urban Centers. Create locations in Newark which are more urban and pedestrian-oriented in character than they are today. Such areas include the future Dumbarton Transit Oriented Development and Old Town. These areas should be transformed over time into mixed-use centers with retail, office, civic, and higher density housing uses. The Project would redevelop vacant, blighted former industrial sites with a mixed used residential community that incorporates commercial/retail uses as part of the Project, high density residential condominiums, affordable for rent units, a bay trail compliant corridor along Enterprise Drive and Willow Street, as well as a five-acre park for use by the Project's residents and a future transit station. The project would incorporate sidewalk connections throughout both the project's northern and southern sites allowing for pedestrians to move freely throughout the area.

Policy LU-6.1 Dumbarton TOD Land Uses. Plan for the following activities around the intersection of Willow Street and the proposed Dumbarton Rail Service: (1) a future transit station serving the region as well as neighboring residents; (2) a neighborhood center consisting of retail, grocery, visitor-serving, and higher-density residential uses; (3) up to 2,500 housing units with a

wide range of unit types and affordability levels; (4) necessary infrastructure to support the development; (5) contribution toward an overpass on Central Avenue over the Union Pacific railroad tracks, and (6) a network of open space and parks, including a bayside trail. The Project implements this Policy by dedicating a net 1.8 acre property for a future transit station and developing 3,600 sf of retail and 370 higher-density residential units, including 90 affordable housing units (and one manager's unit), a five-acre park and the necessary infrastructure to support the Project.

Policy LU-6.2 Dumbarton TOD Design Guidelines. Apply design guidelines to future development at Dumbarton TOD which support the area's development as a "village" comprised of traditional city blocks, vernacular architectural styles, and a mix of housing types. The Project would comply with the Specific Plan's design guidelines, and provide higher density residential housing products, including 90 affordable units, to allow for a variety of housing types. The contemporary architectural styles of the 3 residential products (Split, Towns, Stack) would use colors and materials (light color palette, stucco finishes, and lap siding) similar to surrounding residential developments, while incorporating contemporary low-slope roofs to give the development a subtle unique character to differentiate and add visual interest. With the adjacent location of the future transit hub, linking its future residents to nearby corporate campuses, the product styles would help blend the bold contemporary styles of the campuses with the traditional styles of neighboring residential communities. With the nearby 4-story apartment complex to the south of the project site, the 5-story mixed use podium building being of similar height and mass, would reflect a similar and complimentary style with the use of scored stucco, similar window awnings, and parapet walls with roofed tower elements, as well as a light color palette

Policy LU-6.3 Dumbarton Rail. Advocate for construction of the Dumbarton Rail project connecting Newark to BART and the West Bay, with a station at Willow Street in Newark. As an interim measure until rail service is provided, advocate for high quality, rapid bus service connecting the Dumbarton TOD station area to BART, VTA, and the West Bay, to ensure that new development in this area can meet the TOD goals for the project. As part of the Project, the applicant would dedicate property for the future development of this station. Staff will continue to work with SamTrans to eventually build a transit station at the project site to help the public transportation connection between this site and other services.

Policy LU-6.4 Minimizing Dumbarton TOD Impacts. Minimize the impacts of the Dumbarton TOD on the natural environment by incorporating native plant species, reducing herbicide and pesticide use, using environmentally friendly construction and waste disposal techniques, and managing stormwater runoff to avoid water quality impacts to nearby wetlands and San Francisco Bay. The EIR imposes mitigation measures on the Project that will ensure it is consistent with this Policy. Dumbarton TOD impacts will be mitigated through the use of plant species that specifically aid in phytoremediation which will naturally remove runoff pollutants and salts before runoff reaches sewer systems, wetlands, and adjacent water bodies. Bioretention basins are located in the majority of planter beds throughout the site which will add an additional layer of pollutant filtration. Trees with expansive canopies will be planted throughout the development and will intercept rainwater before touching the ground, thus adding another layer of water treatment.

Policy LU-6.5 Dumbarton TOD Landscaping and Streetscape. Use landscaping and tree planting to enhance the character of the Dumbarton TOD neighborhoods, define the community's edges, provide landmarks and focal points, make streets more pleasant for walking, and create a stronger sense of place. The landscape should reflect climate and soil conditions, as well as the desire to conserve water and create visual appeal The Project would include landscaping consistent with this Policy, in compliance with the Specific Plan design guidelines and as part of the Project's Design Review approval. The landscape would enhance the character of Dumbarton TOD neighborhoods through the use of site specific materiality, planting design, and park design. Enhanced brick and stucco veneers would be utilized for seat walls and retaining walls to visually tie in the landscape built elements with the brick and stucco materials that will be used on the TOD neighborhood architecture. Custom enhanced steel architecture stoop railings and patio fences would match the decorative, linear architectural balcony railings for a heightened sense of identity. These same enhanced steel details will carry through to the landscape park overheads. The planting design would feature wispy, flowing native grasses to capture the native wetland feel of the adjacent bay. Flowering shrubs at pedestrian paseo entry points would add a natural highlight to neighborhood entrances and enhance wayfinding.

Policy LU-6.6 Dumbarton TOD Lighting. Use lighting and illumination which compliments architectural styles, reduces glare and over-lighting impacts, ensures pedestrian safety, and highlights special design elements within the community. The Project would include landscaping consistent with this Policy, in compliance with the Specific Plan design guidelines and as part of the Project's Design Review approval. Modern yet timeless street pole lights, pedestrian scale pole lights, and bollard lights would be specified to match the sconce lighting that will be featured on the community architecture. All pole and bollard lights would feature light fixture covers that would prevent vertical light pollution and also direct light throw towards pedestrian circulation areas and away from private residential units. All pedestrian circulation lighting would be strategically distributed to maintain uniform light coverage based on photometric plans that would be prepared by a certified lighting designer. This uniform lighting design would enhance safety and promote clear pedestrian circulation.

Policy E D-2.4 New Retail Districts. Create additional shopping opportunities in newly developing neighborhoods, such as Dumbarton TOD, to meet the needs of new residents and workers, and reduce the loss of retail dollars to nearby communities. New commercial districts should be designed as integral parts of the neighborhoods they serve, so that patrons can easily walk or bicycle from home or work to shopping. The Project is a mixed use residential project that would incorporate retail uses. The mixed use building would contain 3,600 square feet of ground floor retail space fronting along Willow Ave. The high floorplate façade for the retail space would serve as a grand entry to the project. Residential affordable units would be located above the retail space to provide proper massing and an urban feel. The current plan shows one 1,000 square foot retail space that could be used for a small coffee shop or café plus a 2,600 sf space for another neighborhood serving use such as a restaurant or deli. The retail frontage would also include an enclosed, secured elevator lobby for the affordable housing units.

The Project is consistent with the General Plan's Housing Element because it would increase overall housing stock in the City by 370 total units, including 90 affordable units, and would assist in addressing both the regional and statewide housing crisis.

III. Specific Plan Amendment

A. *The proposed amendments to the Bayside Newark TOD Specific Plan are consistent with the Newark General Plan.* The amendments to the Specific Plan would include re-designation of the Project Site's land use designations/zoning so that the current office uses are replaced with 48 residential units (collectively "Specific Plan Amendment"). These changes are provided to enable implementation of the vision for buildout of the Specific Plan area and made in light of the fact that third part experts have determined that the development of office uses are not feasible on the Project Site. The Project would also be consistent with the overall development capacity and intensity for the Specific Plan area as identified in the General Plan and assumed in the 2013 General Plan Environmental Impact Report ("EIR") and 2011 PEIR. The Specific Plan Amendment would not result in increased development capacity or a change in the intensity of development or site improvements already planned or anticipated in the General Plan and Specific Plan. Nor would the amendments directly result in development types that were not already assumed and evaluated in the General Plan EIR and Specific Plan EIR. Specifically, the Specific Plan planned for the development of a total of 2,500 dwelling and 35,000 square feet of retail, and as of February 2022, a total of 2,171 dwelling units and 3,600 square feet of retail have been approved or are pending approval in the Specific Plan area, leaving plenty of capacity for the Project without resulting in any new or increased impacts on the environment, as concluded in the IS/Addendum to the PEIR prepared for the Project.

IV. Zoning Map Amendment

Pursuant to Newark Municipal Code section 17.39.080, the City finds as follows:

A. The amendment is consistent with the General Plan. The City's zoning map would be amended to change the zoning of the Project Site from Business and Technology Park and Park to Medium Density Residential - Form Based Code, Commercial/Mixed Use - Form Based Code, Transit Station, Public Facilities, and Park. These zones are consistent with the General Plan land use designations for the Project Site, as amended – Medium Density Residential, Commercial Mixed Use, Public Institutional, and Parks and Recreation Facilities. The new zoning designations specifically, and the Project generally, would be consistent with the applicable polices of the General Plan, including but not necessarily limited to the Policies specifically listed in section II above. Therefore, the Zoning Map Amendment would be consistent with the General Plan.

B. *Any change in district boundaries is necessary to achieve the balance of land uses desired by the city, consistent with the general plan, and to increase the inventory of land within a given zoning district.* The Zoning Map Amendment would reflect the changes to land use designations eliminate infeasible office uses and replace them with housing, which is necessary to achieve the balance of land uses desired by the City, and consistent with the General Plan as set forth above. The zoning change would allow underutilized, vacant and blighted former industrial land to be developed consistent with the vision of the General Plan and Specific Plan, and would result in the dedication of property for the City's desired transit station.

C. *The amendment will promote the growth of the city in an orderly manner and to promote and protect the public health, safety, peace, comfort, and general welfare.* The Zoning Map

Amendment and Specific Plan, as amended, would guide the orderly development of the Project in a manner to promote and protect the public health, safety, peace, comfort and general welfare, as required through conformance of applicable policies and regulations of the Specific Plan in addition to the City's zoning requirements. The Zoning Map Amendment would ensure consistency with the Specific Plan and General Plan and would result in orderly and planned-for growth that promotes the General Plan policies described in section II above.

V. Design Review

Pursuant to Newark Municipal Code section 17.34.060, the City finds as follows:

A. *The overall design of the project including its scale, massing, site plan, exterior design, and landscaping will enhance the appearance and features of the project site and surrounding natural and built environment.* The Project would redevelop and revitalize a largely vacant and blighted former industrial site with modern, aesthetically pleasing market rate and affordable residential units, commercial retail uses, a five-acre park, and other landscaping improvements, including trees and greenspaces and other aesthetic improvements such as open spaces on the property dedicated to the City for a future transit station. The massing of the residential units and other development would be appropriate for the area and would enhance the appearance and features of the project site and surrounding natural and built environment.

B. *The project design is appropriate to the function of the project and will provide an attractive and comfortable environment for occupants, visitors, and the general community.* The Project would redevelop and revitalize a largely vacant and blighted former industrial site with modern, aesthetically pleasing market rate and affordable residential units, commercial retail uses, a five-acre park, and other landscaping improvements, including trees and greenspaces and other aesthetic improvements such as open spaces on the property dedicated to the City for a future transit station. The Project design and connectivity would encourage pedestrians, including Project residents and visitors, to walk to the retail uses, park, and future transit station.

C. *Project details, materials, signage and landscaping, are internally consistent, fully integrated with one another, and used in a manner that is visually consistent with the proposed architectural design.* The high-quality exterior building materials, such as brick and stone, are integral to the architectural design per applicable Specific Plan Design Guidelines. The street level storefronts would help create a pleasant pedestrian experience, as well the features of the park and future transit station. Landscape seat walls and retaining walls would feature enhanced brick and stucco veneers with wall caps that would match the community architectural brick and veneer materials. These same brick and stucco materials would carry through to the two entry monument signs to further promote a sense of unique community identity. Custom metal details with linear elements would be featured on the park overheads, patio fences, and architectural unit stoop railings to tie in the custom linear metal balcony railings on the architecture. The project details would be internally consistent, fully integrated with one another, and used in a manner that is visually consistent with the proposed design.

D. *The design of streetscapes, including street trees, lighting, and pedestrian furniture, is consistent with the intended character of the area.* Consistent with the Specific Plan design guidelines, the Project would include these features, consistent with the intended character of the

area, including landscaped walkways and streets, as well as trees. Modern yet timeless pedestrian furniture and light fixtures would be specified to reflect the modern forms of the architecture and the warm, timeless brick and stucco architecture facades. Street trees would feature strong structural forms for year-round interest and vibrant reddish-orange fall color which will create a noteworthy identity for the community. The Bay Trail would run along the perimeter of the community and will be lined with wide parkways and lush native planting which will encourage pedestrian use and interaction surrounding the community.

E. *Parking areas are designed and developed to buffer surrounding land uses; compliment pedestrian-oriented development; enhance the environmental quality of the site, including minimizing stormwater run-off and the heat-island effect; and achieve a safe, efficient, and harmonious development.* The Project would redevelop and revitalize a largely vacant and blighted former industrial site with modern, aesthetically pleasing market rate and affordable residential units, commercial retail uses, a five-acre park, and other landscaping improvements, including trees and greenspaces and other aesthetic improvements such as open spaces on the property dedicated to the City for a future transit station. This would enhance the environmental quality of the site.

F. *Lighting and lighting fixtures are designed to complement buildings, be of appropriate scale, provide adequate light over walkways and parking areas to create a sense of pedestrian safety, and avoid creating glare.* The Project's lighting would be designed in conformance with the Specific Plan's lighting design guidelines, which ensure the lighting will implement all of these goals. See response to LU-6.6 describing the character, specification, and design of landscape lighting.

G. *Landscaping is designed to be compatible with and enhance the architectural character and features of the buildings on site, and help relate the building to the surrounding landscape.* The landscaping design would incorporate "Bay Friendly" landscape practices including native, non-invasive and drought tolerant trees and shrubs to complement the buildings while providing shade and visual interest along the pedestrian path. The sidewalk landscaping would also designed as part of the stormwater management system in compliance with provision C.3 of the Municipal Regional Stormwater NPDES Permit issued by the California Regional Water Quality Control Board, which governs stormwater discharge for new development projects. Finally, the landscaping design would be consistent with and subject to the Specific Plan's design guidelines.

VI. Minor Use Permit

Pursuant to Newark Municipal Code sections 17.35.060 and 17.23.050, the City finds as follows:

A. *The proposed use is allowed within the applicable zoning district and complies with all other applicable provisions of this Ordinance and all other titles of the Municipal Code.* The only aspect of the Project that would require a Minor Use Permit is the request to have a reduced number of parking spaces due to the proximity of the Project's residential uses to a transit station, pursuant to Newark Municipal Code section 17.23.050(A). The Project's uses are permitted in the Project's zoning, as amended, and the Project would qualify for reduced parking by meeting the requirements set forth in Newark Municipal Code section 17.23.050.

B. *The proposed use is consistent with the General Plan and the Specific Plan.* The uses of the Project would be consistent with the General Plan and the Specific Plan as amended, as set forth in detail in the findings above.

C. *The proposed use will not be adverse to the public health, safety, or general welfare of the community, nor detrimental to surrounding properties or improvements.* The Project, and specifically the reduced parking as a result of adjacent transit, would not be adverse the public health, safety, or general welfare of the community, nor detrimental to surrounding properties or improvements, and instead would reduce vehicle miles traveled and promote the use of transit instead of passenger vehicles, and pedestrian travel. The Project would further be consistent with the General Plan polices described in section II above, which are intended to promote the public health, safety, and welfare of the community.

D. *Tax revenue generated by the development will exceed the City's cost of the service demand as a result of the development or a compelling community benefit will be provided.* The Project would redevelop vacant and blighted former industrial property with residential and retail uses, thereby significantly increasing the City's property tax base by increasing the value of the property, as well as creating sales tax.

E. *The proposed use complies with any design or development standards applicable to the zoning district or the use in question unless waived or modified pursuant to the provisions of this [Zoning] Ordinance.* The uses of the Project would comply with all applicable design and development standards and are allowed under the Specific Plan and Zoning Ordinance.

F. *The design, location, size, and operating characteristics of the proposed activity are compatible with the existing and reasonably foreseeable future land uses in the vicinity.* The Project would comply with all applicable design and development standards. Further, the Project would qualify for reduced parking by meeting the requirements set forth in Newark Municipal Code section 17.23.050 due to the close proximity to a future transit station.

G. *The site is physically suitable for the type, density, and intensity of use being proposed, including access, utilities, and the absence of physical constraints.* The proposed Project would comply with all applicable design and development standards, and the General Plan, Specific Plan and zoning. The Project's impacts have been analyzed in detail in the 2011 EIR and Addendum thereto prepared for the Project. Further, the Project would qualify for reduced parking by meeting the requirements set forth in Newark Municipal Code section 17.23.050 due to the close proximity to a future transit station.

VII. Vesting Tentative Map No. 8559

The City makes the following findings which indicate conformance with the State Subdivision Map Act and the City's Subdivision Ordinance (Newark Municipal Code Chapter 16.08):

A. The proposed map would be consistent with the General Plan and Specific Plan as specified in Government Code §65451 as it would provide sufficiently dense residential and commercial uses in an area with pre-existing commercial uses on adjacent property and the immediate area. It would also be consistent with the City's Subdivision Ordinance and the design or improvement of the proposed tentative tract map would be consistent with the General

Plan in that the property is developed by street and parcel improvements in conformance with applicable goals and policies. The proposed map would be consistent with the General Plan and Specific Plan, as amended, for all the reasons set forth in the findings relating to the concurrent General Plan and Specific Plan amendments, and would propose sufficiently dense residential and commercial mixed uses on blighted, vacant former industrial property, which the Project would significantly improve. The street and parcel improvements would comply with all City requirements, and for the reasons discussed in the findings regarding the concurrent Design Review approval, implement the goals and policies of the General Plan and Specific Plan, specifically including redeveloping the western portion of the City.

B. The design and improvements of the proposed subdivision would be consistent with applicable General Plan and Specific Plan, as amended, as the proposed subdivision would include multi-family residential and commercial development, sidewalks, pedestrian paseos, event spaces, and landscaped areas which would be adequately served by streets, and provide sufficient drainage for the development, as detailed in the findings in support of the concurrent Design Review approval, as well as the findings for the concurrent General Plan and Specific Plan amendments.

C. The site would be physically suitable for the type of development in that it is a highly disturbed, blighted for former industrial development, that would be significantly improved to support the proposed residential and commercial uses. There are no known problems regarding cultural, historical or scenic aspects. Given the topography of the site and the location of the proposed construction, it appears that grading would be minimal and in compliance with all City regulations. Therefore, the site would be physically suitable for the type of development.

D. The site would be physically suitable for the proposed density of development as the development would be within with the residential and retail capacities identified in the Specific Plan. The proposed development would be compatible with adjacent and neighboring existing developments in the surrounding area and would significantly improve an area of the City that the City's planning documents have long targeted for development

E. The design of the subdivision or the proposed improvements would not likely cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat, as set forth in detail in the CEQA addendum to the EIR prepared for this Project.. The existing subject property is a developed and highly disturbed former industrial property in an urban area. The proposed subdivision and related development would have no significant impact on the environment's flora or fauna and instead would improve a blighted area.

F. The design of the subdivision or type of improvements would not likely cause serious public health problems. Phased residential subdivisions and associated commercial development would not involve significant amounts of hazardous materials or projects, as set forth in detail in the CEQA addendum to the EIR prepared for this Project.

G. The design of the subdivision or the type of improvements would not conflict with easements, acquired by the public at large, for access through or use of, property within the proposed subdivision. The City has reviewed the records related to the subject property and found that the subdivision would not have a conflict with any easements.

VIII. Affordable Housing – Alternative Means of Compliance to Payment of Housing Impact Fee

Pursuant to Newark Municipal Code section 17.18.050, the City finds as follows:

A. *The proposed alternative means of compliance fulfills the purposes of this chapter as set forth in Section 17.18.010, Purpose.* The alternative means of compliance would fulfill the purposes of section 17.18.010 in that the proposed Project would result in the production of affordable housing that would be available to households with incomes at the very low-, low-, and moderate-income levels. The affordable housing units would be administered through an affordable housing agreement between the City and the property owner that would establish affordability levels for a period of 55-years. The alternative means of compliance would contribute to a more economically balanced community and provides safe and stable housing for households at all income levels.

B. *The proposed alternative means of compliance will further affordable housing opportunities in the city to an equal or greater extent than compliance with the requirements of Section 17.18.020, Housing Impact Fee, and will fully mitigate the impact of the project on the need for affordable housing.* The alternative means of compliance would result in the production of affordable units that have a value equal to or greater than the required housing impact fee and as a result would fully mitigate the impact of the Project on the need for affordable housing.

C. *The proposed alternative means of compliance would better address the city's needs than compliance with the requirements of Section 17.18.020, Housing Impact Fee.* The alternative means of compliance would result in the production of affordable housing with a market rate housing project, resulting in the availability of affordable housing more immediately than what otherwise may be possible though the payment of the Housing Impact Fee.

D. *The proposed alternative means of compliance will not unduly concentrate affordable housing in one geographic area so as to result in housing segregation.* The alternative means of compliance would result in the production of family affordable housing within the Specific Plan area, which does not currently have any restricted affordable housing units, other than 72 affordable units for seniors, out of the 2,500 total residential units allowed in the Specific Plan area, and 2,171 units approved or in process therein. Therefore, there would not be an undue concentration of affordable housing units within one geographical area.

9.8.2022

FMC Willow & Grand Park

City Council Meeting

Project Proposal

Project Proposal

- 279 multifamily units
- 3,600 square feet of retail
- 91 multifamily affordable units
- A 1,485 square foot community building
- 1.8 acres set aside for a future Transit Station
- 5-acre Grand Park (Revision)



Project Location

Project Location

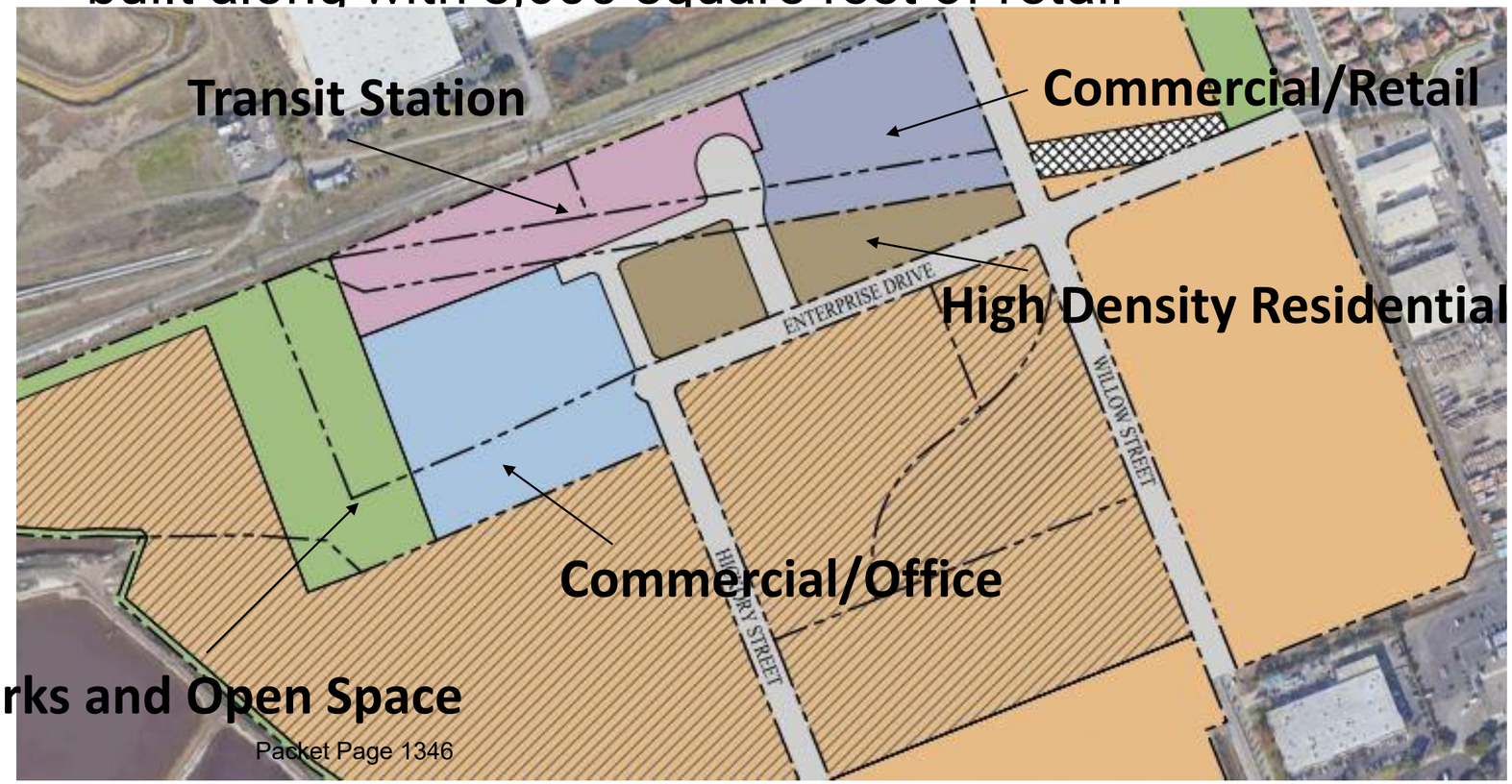
- 22.1 acres located at 8787 Enterprise Drive
- Northwest Corner of Enterprise Drive and Willow Street
- Area divided by the SFPUC Hetch-Hetchy pipeline
- Bordered by:
  - East: Willow Street
  - South: Enterprise Drive
  - North: Union Pacific Railroad
  - West: Residential
- Bayside Transit Oriented Development Specific Plan



Bayside Transit Oriented Development Specific Plan

Bayside Transit Oriented Development Specific Plan

- Adopted in 2010
- Neighborhood Center
- Transit Station focal point
- Anticipated 2,500 residential units, 35,000 square feet of retail/commercial, 195,000 square feet of general office and a 5-acre park.
- Currently, 1,828 units built with 7 parcels undeveloped
- With this project's approval, there would be 2,198 units built along with 3,600 square feet of retail



History of Project

History of Project

- Land Use Feasibility Analysis by Land Econ Group examined the feasibility of the uses proposed in the Specific Plan and supported the elimination of office, reduction in retail, and reduction in residential density.
- City Council and Planning Commission Study Session in Feb 2021
- City worked with SamTrans and the outlook for a potential transit station is 15-20 years.
- Transit Station Area Planning
- Virtual Townhall Meeting on January 20, 2022
- Planning Commission Meeting on July 12, 2022

Requested Entitlement- Design Review

Design Review

A requirement for all projects that are subject to a permit for new construction, reconstruction, rehabilitation, alteration, or other improvements to the exterior of a structure, site, or a parking area.

- North Site: 91-unit affordable housing and 3,600 square foot commercial mixed-use building, 64 market rate multifamily units, and the 1.8-acre future transit station parcel
- South Site: Grand Park, 1,485 square foot community building, 123 multifamily units, and 92 townhomes.
- Entry points



Architectural Style

Mixed Use Affordable Building



Agrarian Contemporary

- Per the Specific Plan
- Clean & crisp look
- Light color palette
- Simple form
- Flat and low-slope roofs
- Horizontal lap siding, stucco, stone veneer, brick, etc.
- Private balconies and awnings

UA Stacks



UA Splits



Community Center



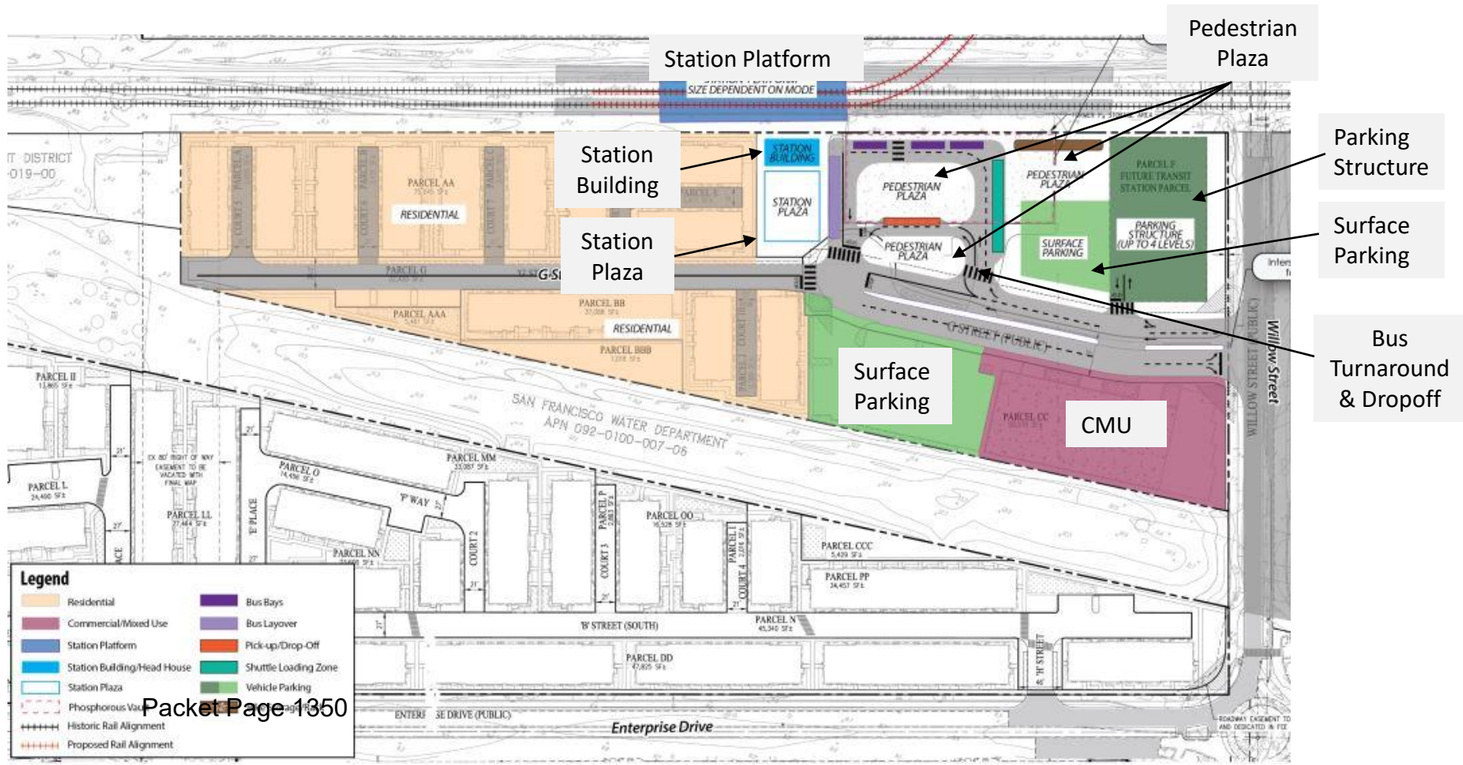
UA Towns



Transit Station and Dedication Agreement

Transit Station

- Size, location, and access
- Fixed platform for transit access
- Transit Station Dedication Agreement
- Parking structure, surface parking, a pedestrian plaza, a station plaza, and a station building
- Transit based layout
- Status of Dumbarton Rail Corridor Project:
  - Listed in Plan Bay Area 2050 in its 2036-2050-time horizon for implementation
  - SamTrans is coordination with the Metropolitan Transportation Commission regarding funding



Bay Trail

Bay Trail

- Bay Trail provides access through Grand Park and Project boundary
- Completes the Bay Trail loop around the Specific Plan area







Requested Agreement- Park Agreement Amendment

Park Agreement Amendment

- An amendment to the previously approved Park Agreement for the Grand Park (Harbor Pointe Subdivision)
- Reconfiguration of the 5-acre park
- Size of the park would remain the same
- Boundary would be adjusted and include additional land on the eastern boundary and the land to the northeast would be reduced.



Requested Entitlements Continued

Minor Use Permit

To allow for reduced parking throughout the project site by 20% due to the close proximity of the project to a future transit station.

Density Bonus Incentive

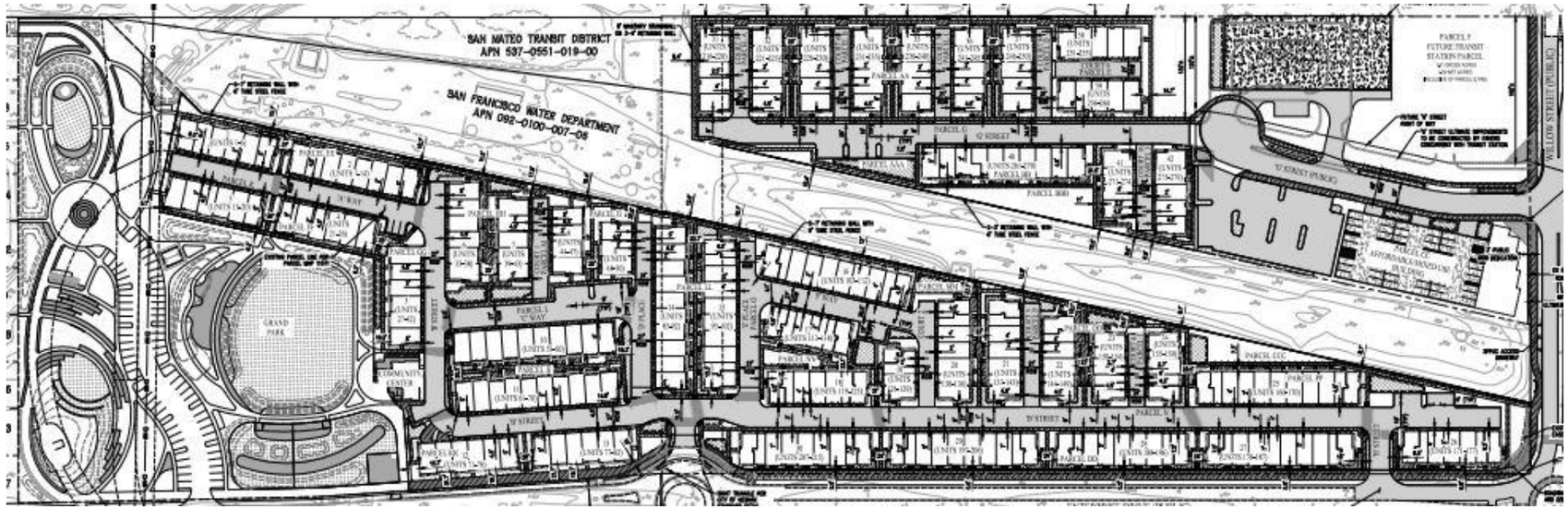
To allow for 1 parking stall for each affordable unit, as an incentive for providing affordable units

Land Use	Required Parking Spaces	Number of Required Spaces	Required with 20% Reduction (MUP) and Density Bonus	Provided Parking Spaces
Multi-Family	2.5 per unit	698	558	630
Affordable Units & Manager's Unit	1.5/1 Bed; 2/2-3 Bed	187	91	91
Retail	3/1,000 s.f. greater than 5,000 s.f.	0	0	9
Total		885	649	730

Requested Entitlements Continued

Vesting Tentative Map

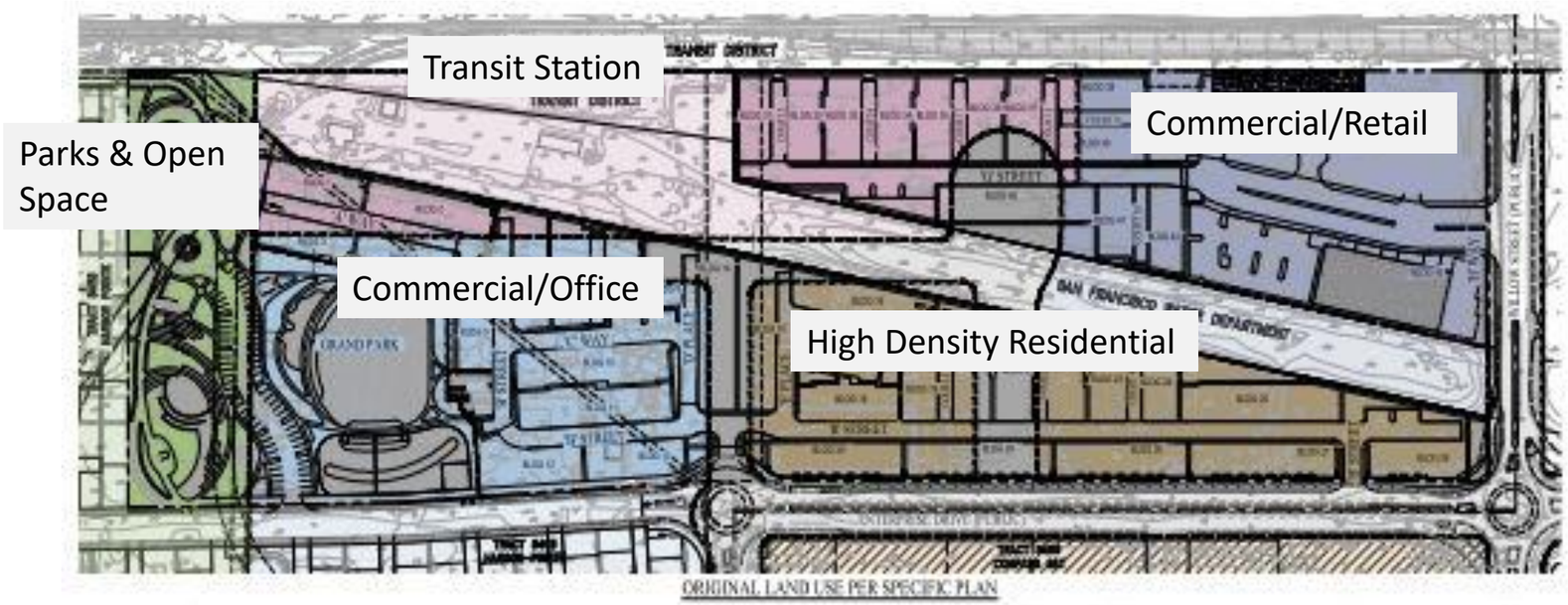
- Vesting Tentative Map to construct 279 multi-family units, 3,600 square feet of retail area, 91 multifamily affordable units, a 1,485 square foot community building, a 5-acre community park, and 1.8 acres set aside for a future transit station.
- 36 lettered parcels



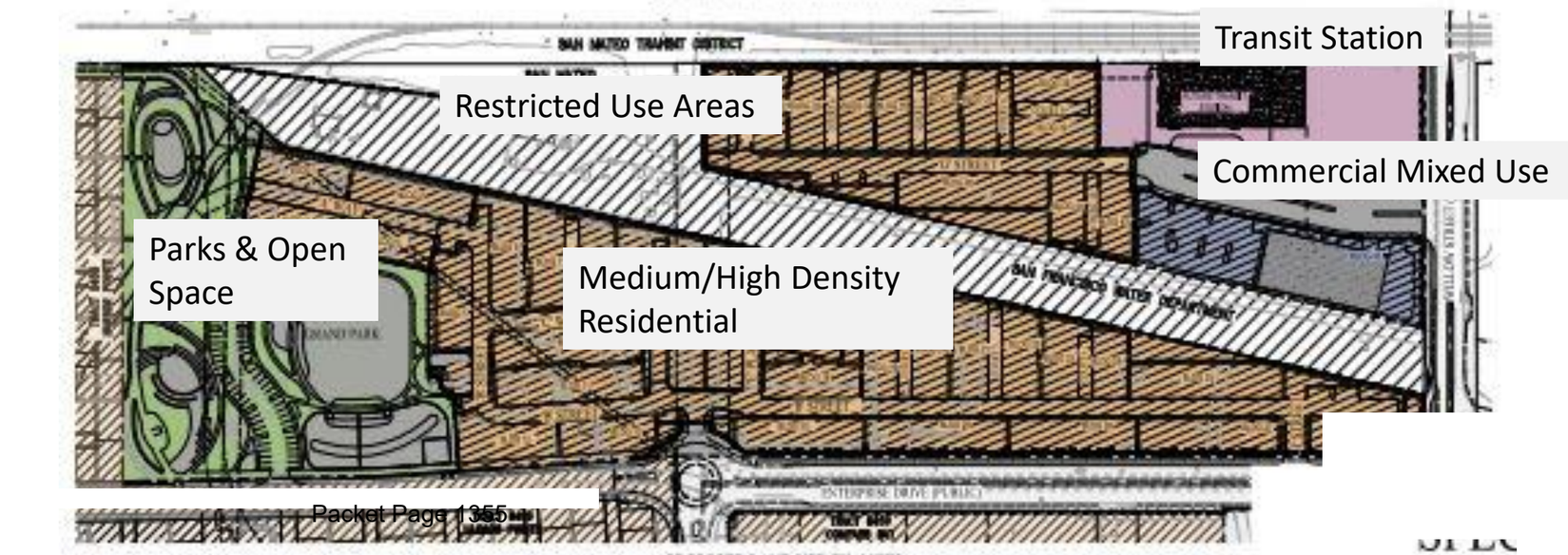
Requested Entitlements- Specific Plan Amendment

Specific Plan Amendment

Specific Plan Amendment for the entire project area to change it from Commercial/Retail, Commercial/Office, High Density Residential, Transit Station, Parks & Open Space to Commercial Mixed Use, Medium/High Density Residential, Transit Station, Restricted Use Areas and Parks & Open Space.



ORIGINAL LAND USE PER SPECIFIC PLAN

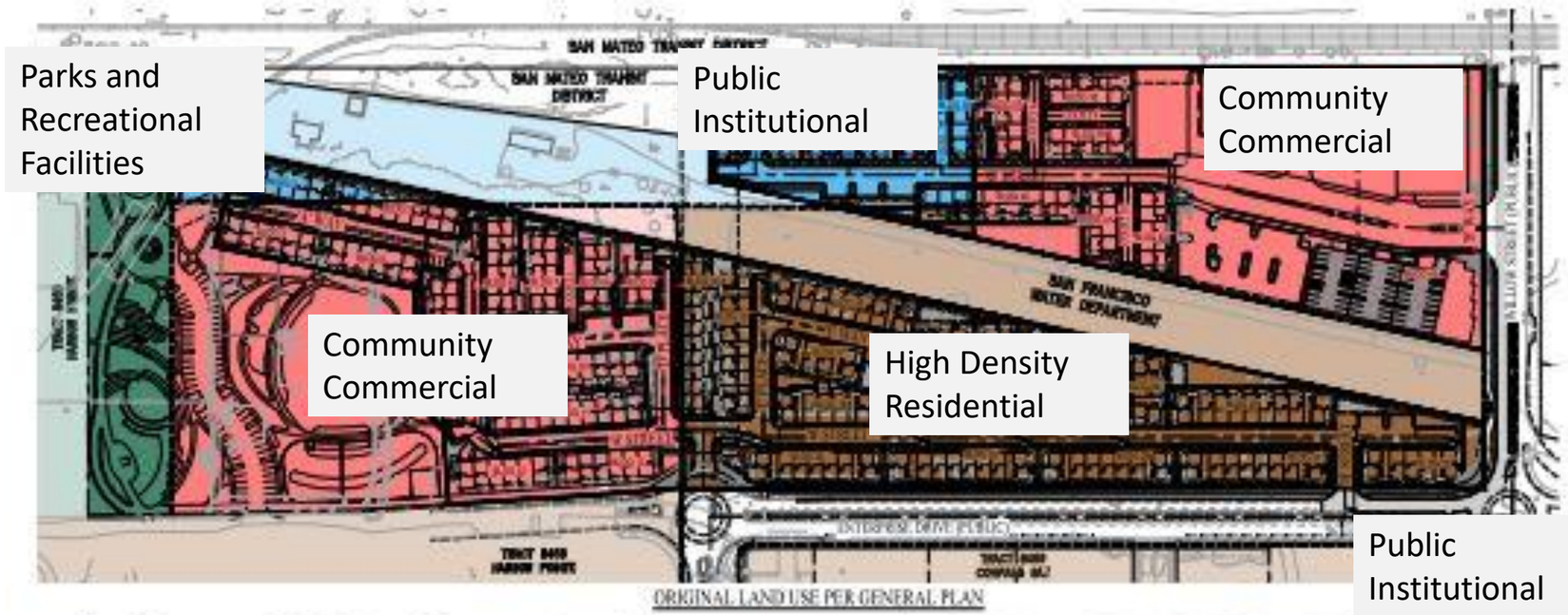


PROPOSED LAND USE CHANGES

Requested Entitlements- General Plan Amendment

General Plan Amendment

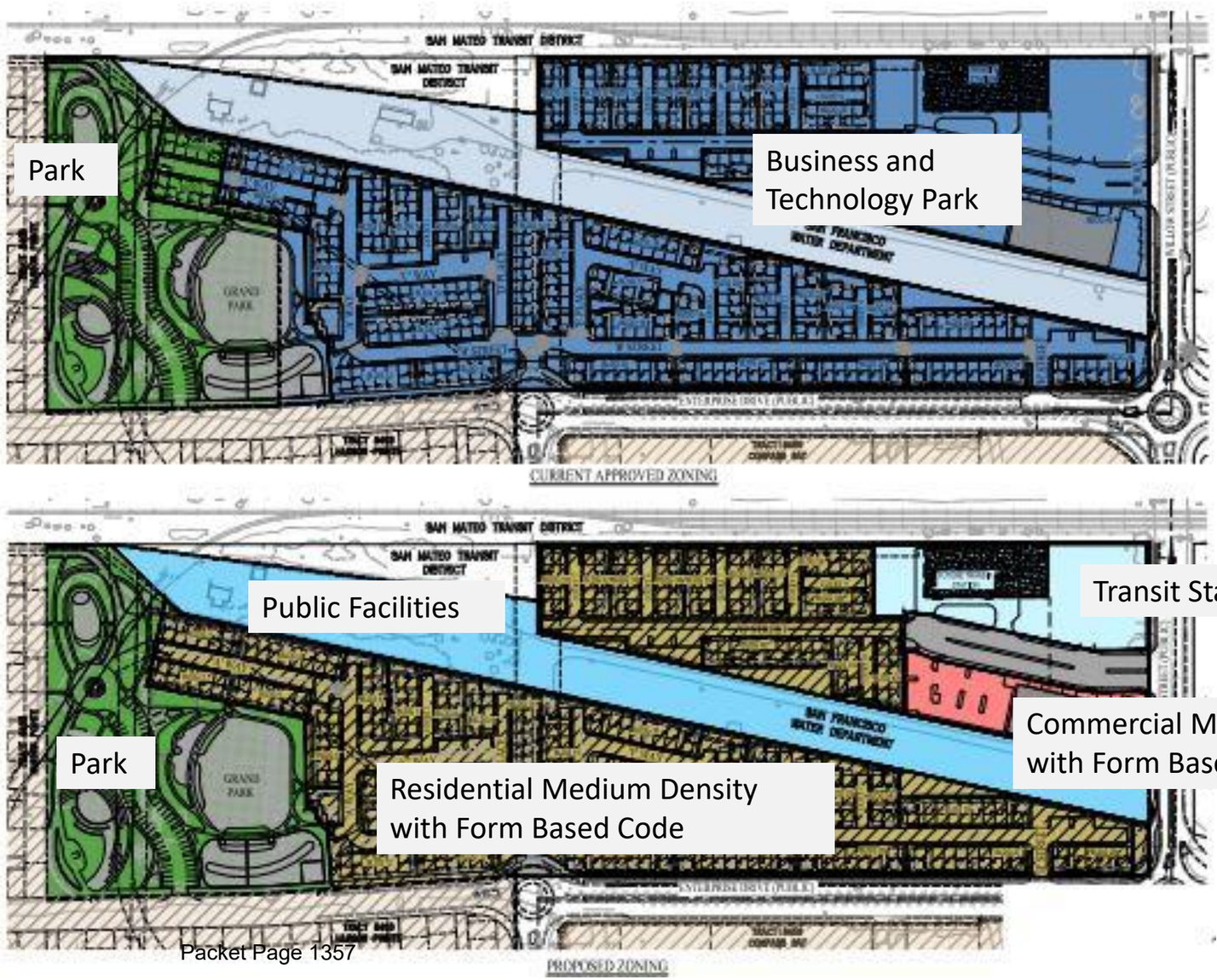
General Plan Amendment from Community Commercial, High Density Residential, Parks and Recreational Facilities and Public Institutional to Medium Density Residential, Commercial Mixed Use, Public Institutional and Parks and Recreational Facilities



Requested Entitlements- Zoning Map Amendment

Zoning Map Amendment

Zoning Map Amendment from Business and Technology Park and Park to Residential Medium Density with Form Based Code, Commercial Mixed Use with Form Based Code, Public Facilities, Transit Station, and Park.



Affordable Housing and Compliance Agreements

Affordable Housing and Compliance Agreements

- Mixed-use building will consist of parking and retail on the first floor, with residential, residential amenities, and retail on the second floor, and all residential on the third floor or higher.
- City of Newark requires developers to pay an impact fee to preserve or increase the supply of affordable housing in the city.
- Alternative to paying the impact fee, developers may provide on-site affordable housing units
- Developer has provided an appropriate mix of affordable units, which mitigates the impacts to affordable housing needs to the city.

Required Distribution Percentage of AMI per Household	Required Units	Units Proposed
Very Low (30-50%)	44	47
Low (50-80%)	21	23
Moderate (80-120%)	19	20
Total	85	90*

- USA Properties Fund would construct and manage the affordable units.
- Developer would also enter into an Affordable Housing Compliance Agreement and Affordable Housing Satisfaction Agreement

CEQA

California Environmental Quality Act (CEQA)

- The City of Newark certified a Program Environmental Impact Report (PEIR) for the Specific Plan in July 2011.
- Initial Study was prepared for this project, which examined the nature and extent of potentially adverse effects on the environment that could occur if the project is approved and implemented.
- Initial Study demonstrated that the proposed project would be substantially similar to the project evaluated in the adopted 2011 PEIR and would not result in any new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
- An Addendum has been prepared to document that the proposed project modifications do not require preparation of a subsequent EIR or negative declaration.

RECOMMENDATION

- Staff recommends, that the City Council:

1) Waive the first reading and introduce a Zoning Amendment based on the analysis and findings of determination;
2) Approve a resolution approving an Amendment to the General Plan, Amendment to the Bayside Transit Oriented Development Specific Plan, Design Review, Minor Use Permit, Density Bonus Incentive, Vesting Tentative Map, Dedication Agreement, Park Agreement Amendment, Alternate Means of Compliance to Payment of the Housing Impact Fee, and an Initial Study and Addendum to the Program EIR for the Bayside Newark Transit Oriented Development Specific Plan

QUESTIONS?

STAFF REPORT

Item F. 1.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Steven Turner, Community Development Director
SUBJECT	Adopt two resolutions approving (1) a Standard Agreement, Loan Agreement, Regulatory Agreement, Promissory Note and Deed of Trust, and (2) a Subordination Agreement for the Towne Place Suite Homekey Project known as "Cedar Community Apartments" at 39802 Cedar Boulevard

SUMMARY AND RECOMMENDATION

Homekey is a statewide program to protect and provide housing for low-income households and those who are experiencing homelessness. Administered by the California Department of Housing and Community Development (HCD), approximately $1.9 billion in grant funding has been made available to develop a broad range of housing types including, but not limited to, hotels, apartment buildings, commercial facilities and other buildings into affordable housing. Abode Services, a Fremont-based non-profit focusing on homeless services and low-income housing, identified an opportunity to acquire the Towne Place Suites extended-stay hotel and propose a project to create Cedar Community Apartments containing 124 units of affordable housing for extremely low-income households through the Homekey grant program.

In January 2022, the City Council authorized staff to apply for a Homekey Round 2 program grant in an amount not to exceed $39 million and assigned $6 million from the city's ARPA Recovery Fund and Housing Impact Fee fund for the project. Additional funding for the project was obtained from the County of Alameda ($4 million in HOME-ARP funds) and from the Housing Authority of Alameda County in the form of 60 Project Based Vouchers, 12 of which would be made available to military veterans. Key aspects of Cedar Community Apartments include:

- 100% permanent, supportive rental housing for a minimum period of 55-years
- 124 units: 60 units for chronically homeless households, 64 units for households at risk of homelessness
- All units for extremely low-income households; incomes of no greater than 30% Area Median Income
- Monthly rents capped at no more than 30% of monthly gross income
- Resident and case management services, mental health, and physical care referrals

Abode Services would be the on-site service provider and Housing for Independent People would be the property management agent.

On July 25, 2022, the City received notification of a Homekey grant award in the amount of $38.2 million. The following agreements are necessary to establish the terms, expectations, and other requirements necessary for the Homekey grant and the City's contribution:

- Loan Agreement
- Regulatory Agreement
- Promissory Note and Deed of Trust
- Subordination Agreement

Key aspects of the project include:

- Local preference- a local live/work preference is required for the at-risk units once the county and the federal Department of Housing and Urban Development agree that the preference is consistent with applicable fair housing laws (see further discussion below).
- Resident Selection Criteria- there is a process for how eligible households are referred to and apply for available resident units.
- Safety and Security- the city staff is sensitive to neighborhood concerns with the proposed change in land use from Hotel to Residential. The project would enhance on-site security and implement maintenance standards and programs meant to reduce nuisance impacts improve communications with the immediate neighborhood.
- Parking- the site would contain 88 automobile parking spaces, a reduction of approximately 46 spaces. An automobile parking waiver would be required for the project. 100 bicycle parking spaces would be provided.
- Design Review- minimal exterior changes would be necessary and considered pursuant to a design review application for these changes that would be reviewed by the Community Development Director.
- Engagement with the community included two virtual meetings for the community to learn about Homekey and the process to convert the hotel to affordable housing. The City has communicated project information through the City's website, social media, electronic email, and courtesy notices.

The Cedar Community Apartments project is consistent with the General Plan's Housing Element and the Council-adopted Affordable Housing Work Plan.

The City is providing a significant $6 million loan to the developer the use of these funds that is appropriate and consistent with the associated implementing resolutions. In future years, the City could expect residual receipts revenues representing an excess of operating revenue minus expenses. Conversion of Towne Place Suites hotel would result in a loss of Transit Occupancy Tax of approximately $300,000 per year, which may be offset by a new hotel that will open in the fall.

Per State statute, Homekey projects are eligible for California Environmental Quality Act (CEQA) streamlining and would be considered statutorily exempt from CEQA. The County of Alameda has prepared a National Environmental Policy Act Environmental Assessment and a Finding of No Significant Impact was issued.

Staff Recommendation

Staff recommends that the City Council adopt: 1) a resolution for acceptance and approval of a Standard Agreement with the State of California's Housing and Community Development Department for a Homekey grant of $38,156,293.00 and, 2) a resolution for approval of Loan Agreement and Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants between the City of Newark and Allied 39802 Cedar LLC, and a Secured Promissory Note and Deed of Trust, and a Subordination Agreement for the Cedar Community Apartments project at 39802 Cedar Boulevard.

BACKGROUND

Homekey Program Overview

Building on the success of Project Roomkey (a COVID-19 response from the state to provide temporary shelter options at hotels), Homekey is the next phase in the state's response to protect low-income households and those who are experiencing homelessness. Administered by the California Department of Housing and Community Development (HCD), approximately $1.9 billion in grant funding has been made available to local public entities, including cities and counties within California to purchase and rehabilitate hotels, motels, vacant apartment buildings, and other buildings for conversion into interim or permanent, long-term affordable housing. The Homekey program requires grant funds to be used to provide housing for individuals and families experiencing homelessness or at-risk of experiencing homelessness.

There have been two rounds of Homekey grants. The 2021 Homekey Round 2 program Notice of Funding Availability was released on September 9, 2021.

Abode Services Opportunity with Town Place Suites Owner

Abode Services, a Fremont-based non-profit focusing on homeless services and low-income housing, identified an opportunity to acquire a hotel property in Newark and participate in the Homekey grant program. Allied Housing (Abode Services' development division) has a purchase option agreement with the owner of Towne Place Suites (TPS), an extended-stay hotel at 39802 Cedar Boulevard to convert the hotel to 100% permanent, supportive residential housing known as "Cedar Community Apartments".

TPS contains 125 suites (57 studios, 38 1-bedroom, and 30 2-bedroom units) with 134 parking spaces on a 2.7-acre site. TPS was built in 2000 and renovated in 2015.

Allied Housing partnered with the City as Round 2 Homekey program applicants to acquire TPS. If acquisition is successful, Allied Housing would acquire the hotel and convert the extended-stay suites to affordable residential apartment units.

Opportunity to Access Homekey Funds

The Homekey program offers an opportunity to receive a substantial grant for site acquisition purposes and funds for operational subsidies and services.

County HOME-ARP Homekey Funding Opportunity

In August 2021, the County of Alameda issued a Request for Proposals (RFP) for

HOME-American Rescue Plan (ARP) program funds to be used for affordable housing projects associated with the State of California's Homekey program. In response, staff from the city and Abode Services/Allied Housing submitted a proposal requesting $4,000,000 of HOME-ARP funds for the Cedar Community Apartments Homekey project.

In January 2022, the County issued a conditional commitment of the requested funds, based upon (among other requirements) a Homekey award from the state.

Housing Authority of the County of Alameda Project Based Vouchers
The Housing Authority of the County of Alameda (HACA) operates the project-based housing voucher program to provide funding to specific units rather than using it for more traditional tenant-based assistance. The program is applicable to existing housing or newly constructed or rehabilitated housing. HACA selects projects to participate in the program in accordance with the requirements of its Administrative Plan.

HACA issued a RFP for Project-Based Vouchers (PBV) in November 2021. Allied Housing submitted a proposal requesting 60 PBV for the Towne Place Suites Homekey project, serving homeless households and/or military veterans. HACA ranked and rated all of the proposals received using the criteria outlined in the RFP.

In January 2022, HACA informed Allied Housing that Allied Housing would be awarded 60 PBVs, contingent on a successful Homekey award.

Council Authorization to Apply with Allied Housing and Assignment of Funds
In January 2022, the City Council authorized staff to apply for a Homekey Round 2 program grant in an amount not to exceed $39 million. The application was submitted to HCD at the end of January 2022. The City was the applicant with Allied Housing as the co-applicant.

In addition to the authorization to apply for Homekey grant funds, the City Council authorized a one-time, $1.5 million allocation of ARPA Recovery Plan funds and $4.5 million of Housing Impact Fee funds for a total contribution of $6 million, contingent on a successful Homekey award. The assignment of local funding would support the community-based effort to provide opportunities to very-low income and homeless households. Assignment of local funding is important to demonstrate support for the project and to contribute to a financing plan to acquire and convert the hotel to housing and provide resident services.

On July 25, 2022, the City received notification of a Homekey grant award in the amount of $38.2 million. Public announcement of the grant award was embargoed by the State until August 25, 2022.

Project Description
The project site, located 39802 Cedar Boulevard, is approximately 2.7-acres in size and currently contains the existing Towne Place Suites extended stay hotel with 57 studios, 38 1-bedroom units, and 30 2-bedroom units across two separate 4-story

buildings. The project site contains 134 parking spaces.

The project includes the conversion of 125 units into 124 permanent supportive housing and affordable housing apartment units (1 of the original 2-bedroom units would be dedicated to a property manager). All 124 units would be permanently affordable to Extremely Low-Income households with incomes between 0 percent to 30 percent of Area Median Income (AMI). 60 units will be dedicated to homeless individuals and families, and the remaining 64 units to individuals or families at risk of homelessness.

Each of the existing 124 extended-stay hotel rooms are already set up as apartments with full kitchens and fully furnished living spaces. As such, the converted residential unit interiors will only require minimal improvements, with the exception of required ADA upgrades for seven units. In addition, the conversion would include renovations to change the existing lobby into community space, property management, and services offices. An ADA accessible modular building would be installed in the parking lot after property acquisition primarily to be used for resident services (described further below). Lastly, conversion includes re-purposing some of the existing surface parking lot area for children's playground equipment, pet area, resident common space, and landscaping. Security fencing and security cameras would be installed on the site.

The site would not include any ground disturbing activities such as demolition, excavation, or construction (other than for new utility connections as may be necessary) nor would it introduce substantial physical changes to the existing buildings or site.

For the purposed of this staff report, the preceding information is considered the "Project".

In summary, the following are key aspects of the Cedar Community Apartments Homekey project:

- Permanent, supportive rental housing for a minimum period of 55-years.
- Property would be owned by Allied Housing (known as Allied 39802 Cedar LLC for ownership purposes), Abode's property development division.
- 124 units: 60 units for chronically homeless households, 64 units for households at risk of homelessness; one resident manager's unit.
- All units for extremely low-income households; incomes or greater than 30% AMI.
- Monthly rents capped at no more than 30% of monthly gross income.
- HACA contribution of 60 Project Based Vouchers (assigned to the homeless household units), 12 of which reserved for military veterans administered through the Veteran's Administration Veterans Affairs Supportive Housing (VASH) program.

In addition to the affordable housing, resident support services are an important and necessary component of Cedar Community Apartments, summarized below:

- Five full-time, on-site staff: including two clinical case managers, one resident services coordinator, one wellness specialist, and one program coordinator.
- Service Coordination to connect all residents with available community resources

such as job training, financial planning, life skills, peer support, transportation services, food banks, cooking classes, exercise classes, and community events.
- Case management with individual service plans for non-VASH residents while VASH households will work with VA case managers.
- Mental Health Care and supportive services to participants living with mental health disabilities. Services for veterans and all populations will be informed by best practices, including trauma-informed care and harm reduction.
- Physical Care: referrals to health and dental services and similar services.
- In-home care, for residents who receive in-home care the services, staff will work closely with health care professionals to ensure that health services are integrated with and support the resident's individualized self-sufficiency plan. Referrals will be available to veterans during weekly case management or more often as needed.
- Substance Abuse Service: For residents who request these services, staff will focus on helping reduce the negative consequences of their substance use. Residents who wish to receive treatment for substance abuse will be provided with referrals, and will receive support from the services staff, including one-on-one support and coordination with the treatment provider.

Site Management Roles

Abode Services (Abode): On-Site Services Provider
Abode has been a provider of services to those who are homeless and at risk of homelessness for 30 years. Abode's programs span a wide breadth of services and offering participant-centered routes out of homelessness. Abode's programs provide targeted services to multiple sub-populations, including veterans, families with children, former foster youth, and people experiencing chronic homelessness.

Abode has extensive experience, not only with providing services to residents of permanent supportive housing, but as an owner and property manager as well. The Abode team therefore brings a special understanding of the property manager/service provider/resident relationship, including the various needs of these roles, and how best to create a safe, supportive environment that addresses the needs of all parties.

Housing for Independent People (HIP): Property Management Agent
Housing for Independent People (HIP) would serve the property management agent for the project. HIP is a property management subsidiary of Abode Services that specializes in managing supportive housing projects for formerly homeless and special needs residents. HIP works closely with service providers to create a community of housing stability and financial stability for residents. HIP only focuses on supportive housing, and it is HIP's mission to serve those that are formerly homeless and have special needs.

DISCUSSION/ANALYSIS

Homekey Award – largest source of funding; completes the funding portfolio
As stated above, on July 25, 2022, the City received notification of a Homekey Round 2 grant award of $38.2 million. The public announcement of this grant was made on August 25, 2022, after the state removed communication restrictions associated with the program. Newark's grant is the sixth largest among 108 total Homekey awards (in both funding rounds) and would be the 10th largest project in terms of total affordable units created.

The Homekey grant is the largest component of the Cedar Community Apartments funding portfolio and allows the other funding (through the County and HACA) to become available for use. The Homekey grant would be formalized through various agreements between the City, the state, and Allied Housing.

State HCD Standard Agreement – Homekey Grant
The Standard Agreement (the "Agreement") is the State of California document that, when executed, authorizes the $38.2 million grant. Under the terms of the Agreement, the City and Allied Housing are considered the "Grantee". The City would be awarded the $38.2 million grant for Allied Housing's acquisition of Towne Place Suites. The Agreement sets the eligible uses of the grant, rent standards, deadlines and reporting requirements, grant disbursement conditions, the specific Homekey program terms and conditions, and the project-specific terms and conditions for the permanent affordable housing program.

In particular, the Agreement establishes the grantee reporting requirements to the State, including a Homekey Program and Expenditure Report (required annually for the first five years) and demonstrated satisfaction of performance milestones. As provided in the City/Allied Housing Loan Agreement, Allied Housing would be responsible for preparing and submitting monitoring reports to the State as directed by the Agreement.

Staff recommends that the City Council adopt a resolution to accept the Homekey grant award for the Cedar Community Apartments project and authorize the city manager to execute the Agreement on behalf of the City Council. The resolution and Agreement are provided as Attachment A.

Agreements with Allied Housing
In addition to the Standard Agreement with the state, the City and Allied Housing would enter into agreements that establish the terms, expectations, and other requirements necessary for the city's $6 million contribution and the $38.2 million Homekey grant to be used for acquisition and conversion of Towne Place Suites into Cedar Community Apartments. The agreements and other documents are:

- Loan Agreement
- Regulatory Agreement
- Promissory Note and Deed of Trust
- Subordination Agreement

Loan Agreement
The Loan Agreement is an enforceable commitment between the City and Allied Housing (the Developer) that, in exchange for a loan of funds, requires Allied Housing

to produce and maintain affordable housing for a period of time, subject to loan and repayment terms, distribution of operating proceeds, and a monitoring program, among other requirements. Key aspects of the Loan Agreement are:

- Loan amount: $38.2 Homekey grant funds + $6 million City funds.
- Use of funds: property acquisition and related costs; predevelopment costs, construction costs.
- Affordable housing commitment: affordable housing must be provided for at least 55-years.
- Development schedule: affordable units must be provided within the timeframes required by the Standard Agreement.
- Payment of prevailing wages: Developer must ensure that contractors and subcontractors comply with the state's prevailing wage requirements and maintain records demonstrating compliance with applicable laws.
- Loan terms: the loan of city funds will accrue simple interest at the rate of 3% per year. The outstanding balance of the Homekey grant funds will not accrue interest.
- Residual receipts: if the Project generates residual receipts (the excess of operating revenue over the operating expenses), the Developer shall make annual payments equal to 60% of 75% of residual receipts to the city and 40% of 75% of residual receipts to the county.
    - Residual receipts are not expected during the initial years of the Project.
    - Developer would retain 25% of any residual receipts generated.
    - Developer shall maintain records verifying residual receipts (or lack thereof).
- Loan re-payment:
    - If the Homekey grant is required to be repaid, the Developer is responsible for making the repayment.
    - If the Homekey grant obligations have been satisfied and City/Developer are no longer responsible for repayment, the Homekey grant shall be forgiven.
    - The balance of the city funds with accrued interest shall be paid in full upon Developer default and upon expiration of the 55-year term.
- Other provisions for loan disbursement, refinancing, use of the property, changes in ownership, loan security, environmental matters, defaults, and indemnification.

Staff recommends that the City Council adopt the resolution to approve the Loan Agreement by and between the City of Newark and Allied 39802 Cedar LLC and authorize the City Manager to execute the Loan Agreement on behalf of the City. The resolution and Loan Agreement are provided in Attachment B, Exhibit 1.

Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants
The Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants (the Regulatory Agreement) between the City and Allied Housing (the Owner) acknowledges the Loan Agreement that's required for the acquisition and development of affordable housing. The intent of the Regulatory Agreement is to regulate and restrict the occupancy and rents of the affordable units for the benefit of the occupants and the city. The Regulatory Agreement runs with the land and is binding on the property owner and any property owner's successors for the full 55-year term of the agreement. Key aspects of the Regulatory Agreement are:

- Affordability: no fewer than 124 units are rent restricted for occupancy by eligible households who are homeless or at-risk of homelessness. One unit will be

occupied by an on-site manager and is not rent-restricted.

- Extremely low-income rents: monthly rents cannot exceed 30% of a tenant's actual income, which must be no more than 30% of the Alameda County AMI.
- Tenant certifications: the Owner or agent must collect and retain income and resident identity information on a yearly basis to assess conformance with income requirements.
- Annual reporting and inspections: the property owner shall maintain resident data and records complied into an annual report to demonstrate compliance with the Regulatory Agreement. On-site inspections by the city are allowed with 24-hours advance notice to the property owner or designated agent.
- Property management- including an experienced management agent reasonably acceptable to the City to oversee all aspects of on-site operations, maintenance, up-keep, repairs, records retention, and security (along other responsibilities). City can conduct performance reviews and demand the replacement of the agent, if necessary. Details regarding site security are provided below.
- Requirements for repairs, maintenance, and security- the property owner shall maintain the property in good physical condition, in good repair, and in safe, sanitary, habitable living conditions in conformance with state, federal, and local laws.
- Marketing and Management Plan- addresses how the property owner plans to manage the property and market the affordable units to eligible households in accordance with fair housing laws and the Regulatory Agreement. The Marketing and Management Plan contains the tenant selection criteria, and tenant certification process. This plan also describes the management team and addresses how the management entity plans to manage and maintain the property and the project. The owner shall submit modifications to this plan to City for review and approval.
- Social services- the Regulatory Agreement requires the provision of social services in accordance with the Standard Agreement and described earlier in this report. Owner shall ensure that all personnel providing or coordinating all social services shall be adequately trained and counseled, including with respect to the appropriate means and methods of communicating and interacting with residents. Any substantive change in the scope, amount, or type of social services to be provided shall be subject to prior reasonable approval of City.
- Other provisions for insurance, transfers and encumbrances, defaults, and indemnification are provided in the Regulatory Agreement.

Staff recommends that the City Council adopt the resolution to approve the Regulatory Agreement by and between the City of Newark and Allied 39802 Cedar LLC and authorize the City Manager to execute the Regulatory Agreement on behalf of the City. The resolution and Regulatory Agreement are provided in Attachment B, Exhibit 2.

Secured Promissory Note and Deed of Trust

The Secured Promissory Note is the document containing the developer's promise to repay the City Loan to the City. It is what is known as a "residual receipts" note, because repayment is only required to be paid from a percentage of the net proceeds (or "residual receipts") of the housing project. Three-percent interest will accrue on the $6,000,000 portion of the City Loan that will be obtained from City funds, and no

interest will accrue on the portion of the Promissory Note that is funded by the Project Homekey Grant from the State. Once the State certifies that all of the Project Homekey requirements have been satisfied, the portion of the Promissory Note that is funded by the Project Homekey Grant will be forgiven.

The Promissory Note will be secured by a Deed of Trust, Assignment of Rents, Security Agreement and Fixture Filing (the “Deed of Trust”) that will be recorded against the property. If the developer fails to make payments as required under the Promissory Note, the Deed of Trust allows the City to foreclose upon the property and exercise other remedies.

Staff recommends that the City Council adopt the resolution to approve the Secured Promissory Note and Deed of Trust and authorize the City Manager to execute the documents on behalf of the City. The resolution containing the Secured Promissory Note and Deed of Trust are provided in Attachment B, Exhibits 3 and 4.

Subordination Agreement
The Subordination Agreement identifies the county and City loans that would be provided for the project, acknowledges the promissory note and deed of trust prepared for each loan, and the process for notification and loan default cures. It establishes the priority for the loans as provided in the City and county's regulatory agreements and deeds of trust, with the City regulatory agreement as superior to the county's and the City's deed of trust superior to the county's deed of trust.

Staff recommends that the City Council adopt the resolution to approve the Subordination Agreement and authorize the City Manager to execute the document on behalf of the City. The resolution containing the Subordination Agreement is provided in Attachment B, Exhibit 5

Local Preference
The Regulatory Agreement includes a requirement for applying a Newark live/work preference for the 64 affordable units available to households that are at-risk of becoming homeless, subject to prohibition by applicable law or the county’s financing or restrictions or from other financing sources for the Project. As of the date of this report, the federal Department of Housing and Urban Development (HUD) has provided an interpretation that the local preference requirement may be inconsistent with applicable fair housing law. As a result, the county would not support a local preference, in that HUD is the source of the county’s funding for the Project.

City staff continues to work with HUD and the county regarding the applicability of a local preference to the Project. The City has recently completed a displacement study and disparate impact analysis that provides evidence of residential displacement from Newark due to a variety of housing factors and findings that providing a local preference would not have an unintended disparate (or divergent) affect from the intent of creating affordable housing consistent with fair housing laws and policies. Utilizing these studies, staff will continue to advocate for the Project’s local preference requirements. Thus, staff retains the requirement in the Regulatory Agreement and in the tenant section criteria upon approval by HUD and the county.

As described in the Tenant Selection Criteria below, households that are at-risk of homelessness may apply for tenancy and would be assigned “points” for vulnerability factors confirmed as “true” at the time of application. Applicants that can demonstrate Newark residency or employment location would receive an additional “point”.

All applicants with the highest vulnerability point total will be given preference based on a lottery system for everyone with the same point total. The Newark Live/Work applicants will be given preference over other applicants with the same total vulnerability score. Once everyone at the highest vulnerability index is processed, then the next highest vulnerability point total group is given preference based on a lottery for everyone in that next highest point total with Newark Live/Work applicants being given preference over other applicants with the same total vulnerability score. This will continue until all applicants with a score are processed. If there are still units left after all applicants with a vulnerability score have been processed, then a lottery will be used for the remaining applicants, with Newark Live/Work applicants with a zero-vulnerability score given a preference over other applicants with a zero-vulnerability score. Abode services will provide more information on the scoring process at the City Council meeting.

As described earlier in the report, the units set aside for homeless households will utilize housing vouchers issued by HACA that subsidize monthly rental rates. These vouchers have requirements that limit the ability to prioritize one household over another household. As a result, a local preference requirement is not applicable to the 60 homeless household-designated units.

Resident Selection Criteria

As indicated earlier in the report, Cedar Community Apartments would contain apartment units for two household groups: 60 units would be made available for homeless households and 64 units for households that are at-risk of homelessness. In order to be eligible for these units, all households may not have a gross income of more than 30% of the Area Median Income (AMI) for Alameda County based on household size. The current Alameda County AMI for a household of four persons is $142,800. 30% AMI for a household of four is $42,850 per year. For the “at-risk” units, tenants would need to demonstrate a minimum income of two times the monthly rent of the unit to be leased. There is no minimum income for the homeless household units. In addition, all eligible households shall comply with the following:

- Submittal of identity and proof of income documents
- Credit check for household members aged 18 years or older to confirm income and asset certification proposes
- Criminal background checks for all adult household members. Grounds for denial include, but are not limited to, serious felony offensives such as domestic violence, sexual abuse, weapons possession, sex offender status, violent behavior, drug sales or manufacturing
- Submittal of complete resident application documents

The tenant section process is defined by unit type, either 1.) “Referral Units” (units available to homeless households), or 2.) “Non-Referral Units” (units available to

households at-risk of homelessness). The Cedar Community Apartment's management agent coordinates tenant selection with referral sources.

Referral Units – 60 units

- 48 units for formally chronically homeless households would be referred through a referral source, the Alameda County Coordinated Entry System (CES) by Homestretch. These units would receive a Project Based Voucher (PBV) subsidy through the Housing Authority of Alameda County (HACA). Households would be prioritized based on the highest need for housing and services
- HACA will maintain a household wait list for these units and will apply preference criteria
- CES will refer interested applicant's contact information and completed application packets to the management agent to continue the application process
- 12 units for income eligible military veterans would be available through the Veterans Administration Supportive Housing (VASH) program administered by the Palo Alto Veterans Affairs (VA) office

Non-Referral Units – 64 units

- 64 units for households that are at risk of homelessness
- Available units will be offered by the management agent through the Alameda County affordable housing portal and on the Eden I&R Housing Database/211 referral list
- Household applicants are scored on a variety of vulnerability factors and would receive "points" for each confirmed vulnerability factor
- Households with identical scores would be grouped and given preference based on a lottery system. Highest scoping households would be processed first, followed by the next highest scoring household group. This continues until all households with a score have been processed
- The management agent will maintain a household waitlist for these units

The Site Specific Residential Selection Criteria is part of the Cedar Community Apartments Marketing and Management Plan, identified by reference in the Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants agreement and is subject to the requirements contained in that agreement.

Safety and Security

City staff is sensitive to neighborhood member's concerns with the proposed change in use from Hotel to Residential.

The Developer is proposing the following additions and functions to the property to promote safety and security in the neighborhood:

- Security fencing around the perimeter of the site, with the exception of a small visitor parking area along Cedar Boulevard. There will be an access-controlled gate leading to the private parking area
- Security cameras placed at strategic locations around the site
- 24-hour/seven days per week uniformed security guard who will patrol the premises

The Regulatory Agreement also addresses on site security and requires building- and

site-maintenance and repairs to prevent the property for falling into disrepair that may promote nuisance activity, including:

- Employ defensible space design principles and crime prevention measures in the operation of the Project including but not limited to conducting a yearly security inspection, utilizing Crime Prevention Through Environmental Design (CPTED) principles, and review of illegal activity review with City of Newark Police Department
- Work with the City of Newark Police Department (PD) to implement and operate an effective neighborhood watch program
- Maintain an on-site contact, available 24 hours per day, to receive complaints and concerns from the community, and promptly respond to and address such complaints and concerns
- Exercising city's right to enter the property if Newark PD becomes aware of or is notified of any conditions that pose a danger to the peace, health, welfare or safety of the tenants and/or the surrounding community, and to perform or cause to be performed such acts as are necessary to correct the condition.

As described above, the resident section process contains provisions for background checks and grounds for denial of residences applications based on certain serious felony offensives.

As provided in the Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants agreement, Cedar Community Apartments would employ an experienced management agent with the demonstrated ability to operate a residential development in a manner that will provide decent, safe, sanitary housing. The city must approve the management agent, conduct performance reviews, and force the replacement of the management agent if in the judgment the city the development is not being operated and managed in accordance with any of the standards of the Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants agreement.

The Regulatory Agreement contains strict default and remedy provisions for certain management, financial, and performance aspects violations, including the terms, provision, or covenant of the agreement. The intent is to set expectation between the city and the owner for agreement defaults and the procedure to correct or cure those defaults, including the city's option to pursue all legal remedies to force compliance.

Parking

The existing hotel contains 134 automobile parking spaces, accessed off a driveway from Cedar Boulevard. The plans for Cedar community Apartment include conversion of some of these spaces into resident amenity space and an area for a residential services trailer, resulting in 46 fewer parking spaces for a total of 88 spaces provided. A typical residential development with the proposed unit and bedroom count would require over 200 parking spaces.

State law allows developers of permanent, supportive rental housing to request an automobile parking waiver of up to 100% of the required parking. The Developer intends to request that the city support a waiver to allow 88 paces under the city's

Density Bonus for Affordable Housing regulations, provided in Newark Municipal Code Section 17.19. The Planning Commission would consider the waiver request and make a recommendation to the City Council. The waiver process would be initiated after the Council's consideration of the Homekey and Cedar Community Apartments agreements.

Design Review
Minimal exterior building and site improvements would be needed for the conversion of the existing hotel to an affordable housing residential use. Improvements include:

- A resident services/community room modular building would be placed near Building A (adjacent to the property line shared with the retail center to the northwest of the site). Utility connections would be installed, and the building would be painted with colors that complement the existing buildings colors
- A six-foot high metal security fencing with key card access controls would be placed at the front of the property that matches the color and materials of the exiting permitter fencing
- Approximately 16 parking spaces would be available for visitor and guests at the front of the property that may be accessed by visitors to the site
- Installation of new security camera at strategic locations throughout the property
- Installation of a bicycle parking area within the secured parking area with room for 100 bicycles.
- ADA parking, safety, and accessibility improvements
- Removal of existing pool and equipment. Installation of children's playground equipment, pet area, outdoor community spaces and landscaping, and designated outdoor smoking areas

All other exterior aspects of the property and site would remain unchanged.

The developer would be required to received design review approval, consistent with Newark Municipal Code (NMC) Chapter 17.34. Based upon the scope of work described above and the assignment of Design Review responsibilities described in NMC 17.34.030, the Community Development Director would be the design review authority for this project. The design review process would be initiated after the Council's consideration of the Homekey and Cedar Community Apartments agreements.

Community Engagement
Engagement with the community regarding the proposal to convert the hotel to permanent, supporting rental housing has occurred in a variety of ways:

- Abode Services and Allied Housing hosted a virtual community meeting on Wednesday, November 10, 2021, for community members within the vicinity of the Towne Place Suites site. The meeting was an opportunity for the public to learn more about the Homekey grant, the proposal to convert the hotel use to a residential use, and learn about Abode Services approach to resident services.
- A second virtual community meeting was held on Wednesday, March 9, 2022. The format and information presented at this meeting was similar to the November 2021 meeting, but also included information from the Newark Police Department regarding safety and security associated with affordable housing sites in Newark.

- The city has prepared and updated a project website that includes frequently asked questions and other project information. The city also has engaged the community through social media posts and electronic mails when new information becomes available.
- A courtesy notice for the September 22, 2022 meeting was mailed to property owners within a 1000-foot radius of the Cedar Community Apartments site.

Next Steps
If City Council accepts the staff recommendation, the development of Cedar Community Apartments would proceed in the following general timeline, subject to change depending on unique circumstances of the project:

Property acquisition	October 2022
Design review and parking concession consideration	October 2022
Marketing, advertisement, and tenant referrals and recruitment	October 2022 – March 2023
Site and building improvements/renovations	October 2022 – March 2022
Leasing activities/resident move-in	October 2022 – March 2023

General Plan and Housing Element Conformance
The Homekey project is consistent with the 2015-2023 Housing Element programs of the General Plan, including:

- Program 1: The City will continue ongoing work with non-profit and for-profit housing developers and organizations to support efforts to create new housing for seniors, people with disabilities, formerly homeless people, households with moderate incomes or below, especially including extremely low-income households, and other special needs populations. Funding will be prioritized for housing for people with special needs and very low-income people
- Program 2: The City will continue support for regional efforts to end homeless, such as the Alameda County EveryOne Home Program, which prioritizes supportive housing.
- Program 8: Seek Federal, State, County and Regional Funds for Affordable Housing. The City shall apply for state, County, regional and Federal funds to construct housing for low income and special needs households. Funding to provide infrastructure that would support housing development will also be sought.

Housing Impact Fee Fund and Affordable Housing Work Plan Conformance
The use of the Housing Impact Fee fund (Fund) for the Homekey program is consistent with the implementing ordinance and resolution for the Fund. Use of the Fund is also consistent with the 2021-2023 Affordable Housing Work plan (Work plan) adopted by the City Council. The Work plan includes site acquisition activities for developing affordable housing. Up to 40% of the Fund (or approximately $12M based on the current Fund balance) could be used for site acquisition purposes.

FISCAL IMPACT

The City's $6 million commitment, comprising $1.5 million in ARPA funds and $4.5 million in Housing Impact Fee funds, is consistent with the requirements of each funding source, the Housing Element, and the Affordable Housing Workplan. Also described above is the $38.2 million Homekey grant award received from the state's Housing and Community Development department. This award was granted to the City as the Homekey applicant and to Allied Housing as the co-applicant. The Homekey grant funds and the City's $6 million contribution would be used to fund the acquisition, pre-development, and development costs associated with the Project. There would be no other direct costs to the City for the acquisition and development of the Project.

As provided in the Loan Agreement, the City would be eligible to receive Residual Receipts from the project. Residual Receipts are the excess of annual operating revenue generated by the Project over the annual operating expenses. Allied Housing would receive 25% of the Residual Receipts. The remaining funds would be shared with Alameda County and other lenders on a pro-rata shared basis.

Based on the Project's financial projections, Residual Receipts revenue are not expected in the initial operating years. As described in the Loan Agreement, the Project would need to be re-financed, upon City approval, over time to maintain solvency of the project (Section 5.1). Residual receipts could be received after re-financing but expected revenue amounts are not known at this time.

City staff would be responsible for on-going monitoring and compliance, as well as review and approval tasks associated with the various agreements. It is expected that these tasks would require between 40 and 80 hours of Community Development staff time per year.

The conversion of the existing hotel to residential use would result in the loss of Transit Occupancy Taxes (TOT) in the amount of approximately $300,000, based on an average Towne Place Suite TOT revenue over the past five fiscal years. However, this loss could be offset by the new 112-room Hyatt Place Hotel at 5600 John Muir Drive (anticipated opening Fall 2022).

ENVIRONMENTAL/PLANNING COMMISSION REVIEW

Per State statute, Homekey projects are eligible for CEQA streamlining and would be considered statutorily exempt from CEQA. The Project would also be categorically exempt from CEQA through the Class 1 (Existing Facilities) exemption. The County of Alameda, as the "Responsible Entity" has prepared a National Environmental Policy Act (NEPA) Environmental Assessment (EA), similar to a CEQA Initial Study. The EA was required for the County's $4 million contribution of federal HOME funds as well as the 60 Project Based Vouchers from the Housing Authority of Alameda County (HACA). The EA was prepared and a Finding of No Significant Impact was issued.

REVIEW AND APPROVAL

Prepared by - Steven Turner, Community Development Director
Reviewed by - Kristopher J. Kokotaylo, City Attorney
Approved by - David J. Benoun, City Manager

Attachments

A- Resolution- Project Homekey Standard Agreement
Exhibit 1 - Standard Agreement
B- Resolution- City Agreements
Exhibit 1 - Loan Agreement
Exhibit 2 - Regulatory Agreement
Exhibit 3 - Deed of Trust
Exhibit 4 - Promissory Note
Exhibit 5 - Subordination Agreement
Presentation

RESOLUTION NO.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWARK APPROVING PROJECT HOMEKEY STANDARD AGREEMENT BY AND AMONG THE CALIFORNIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT, THE CITY, ALLIED HOUSING, INC., AND ALLIED 39802 CEDAR LLC, FOR THE CEDAR COMMUNITY APARTMENTS HOMEKEY PROJECT

WHEREAS, the City of Newark ("City") and Allied Housing, Inc. ("Allied") have jointly applied for and have received approval of a grant from the California Department of Housing and Community Development ("HCD") in the amount of Thirty-Eight Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($38,156,293.00) (the "Homekey Grant") to finance the acquisition and conversion of an existing hotel property located at 39802 Cedar Boulevard, Newark, California (the "Property") into an affordable supportive housing project for chronically homeless persons and persons at risk of homelessness (the "Project"); and

WHEREAS, HCD has prepared and presented to City, Allied and Allied 39802 Cedar, LLC ("Developer"), a Standard Agreement with HCD, Agreement Number 22 HK-17486, which sets forth the requirements imposed in connection with the Homekey Grant (the "Project Homekey Agreement"); and

WHEREAS, the City desires for Developer to acquire the Property and convert it into a one hundred twenty-five (125) unit multifamily residential apartment complex consisting of fifty-seven (57) studio units, thirty-eight (38) one-bedroom units, and thirty (30) two-bedroom units, and for all of the units (except for one on-site manager's unit) to be rented at an affordable housing cost to extremely-low income households; and

WHEREAS, the acceptance and use of the Homekey Grant is necessary for the funding of the acquisition of the Property and conversion and operation of the Project; and

WHEREAS, housing projects that are funded by Round 2 of Project Homekey are exempt from the requirements of the California Environmental Quality Act ("CEQA") pursuant to Health and Safety Code Section 50675.1.4, provided that certain statutory prerequisites are satisfied; and

WHEREAS, the City has determined that the statutory prerequisites to the CEQA exemption set forth in Health and Safety Code Section 50675.1.4 have been satisfied with respect to the Project; and

WHEREAS, the Project consists of the minor alteration of existing private structures involving negligible or no expansion of existing or former use, and is therefore also exempt from the requirements of CEQA pursuant to Section 15301 of the CEQA Guidelines;

WHEREAS, the County Housing and Community Development Department has made a Finding of No Significant Impact that determines that the Project will have no significant impact

on the human environment, and that an Environmental Impact Statement under the National Environmental Policy Act of 1969 (NEPA) is not required.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Newark hereby resolves as follows:

1. The City Council finds that the foregoing Recitals are true and correct and are incorporated into this Resolution.

2. The City Council hereby approves the Project Homekey Agreement, substantially in the form presented to the City Council, with such non-material changes as may be approved by the City Community Development Director and the City Attorney.

3. The City is authorized and directed to receive the Homekey Grant pursuant to the terms of the Project Homekey Agreement.

4. The City Council authorizes the City Manager (or his designee), on behalf of the City, to execute the Project Homekey Agreement and to take such other actions as are necessary to carry out the City's obligations under the Project Homekey Agreement, including the execution of escrow instructions and closing documents.

5. The City Council finds that the Project is exempt from CEQA pursuant to Health and Safety Code Section 50675.1.4 and Section 15301 of the CEQA Guidelines. City staff is authorized and directed to file a Notice of Exemption from CEQA with the California Office of Planning and Research and the County Clerk of the County of Alameda in the manner specified in Subdivisions (b) and (c) of Section 21152 of the Public Resources Code.

Passed and adopted by the City Council of the City of Newark at a meeting duly held on the 22nd day of September, 2022, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

:

DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT
ADMINISTRATION AND MANAGEMENT DIVISION
Business and Contract Services Branch
Contracts Office
2020 W. El Camino Avenue, Suite 130, 95833
P. O. Box 952054
Sacramento, CA 94252-2054
(916) 263-6928 / FAX (916) 263-6917
www.hcd.ca.gov

9/12/2022

Steven Turner, Community Development Director
City of Newark
37101 Newark Boulevard
Newark, CA 94560

Jonathan White, Chief Real Estate Officer
Allied Housing, Inc.
40849 Fremont Boulevard
Fremont, CA 94538

Jonathan White, Chief Real Estate Officer
Allied 39802 Cedar LLC
40849 Fremont Boulevard
Fremont, CA 94538

Re: **Contract 22-HK-17486, *Cedar Community Apartments***

Dear Steven Turner and Jonathan White:

Attached is an electronic copy of the Homekey Program (HK) Standard Agreement 22-HK-17486 with Exhibits A through E.

A. <u>Standard Agreement (STD. 213 and Exhibits A through E)</u>

STD. 213 - Cover page

Exhibit A - Authority, Purpose and Scope of Work

Exhibit B – Budget Detail and Payment Provisions

Exhibit C - State of California General Terms and Conditions – GTC - 04/2017

Exhibit C is now incorporated by reference; please see the STD. 213 for additional information.

Exhibit D – Homekey General Terms and Conditions

Exhibit E – Project Specific Provisions and Special Terms and Conditions Interim, Permanent, or Interim Housing-to-Permanent Housing

<u>For expeditious handling of the contract, please adhere to the following:</u>

1. Review the entire Agreement thoroughly and, if necessary, discuss the requirements with your legal and financial advisors.

2. The person or persons authorized by the Resolution(s), must provide an **original signature, printed name, title and date, using blue ink,** on the lower left-hand section entitled "Contractor" on the STD 213 and/or on page 2 of the STD 213, if applicable.

B. The Department now offers two options for returning signed STD 213; please review and complete one of the following options:

1. **Option One:** For electronic signature processing, reply to this Standard Agreement email notification with the attached, fully signed STD 213 page. All signatures must be in **blue ink**. All signers must be included in the reply email and confirm acceptance of e-signing the Agreement.

2. **Option Two:** Print one copy of the Standard Agreement, STD 213. Do not send photocopies of the signed STD 213 page. The hardcopy must be an original, **wet** signature and in **blue ink**; do not return the Exhibits to HCD.

3. **Note:** If the resolution did not authorize a designated official to sign the STD 213 and amendments thereto, your governing body must adopt a resolution authorizing a designated official(s) to sign the STD 213 and any subsequent amendments. If the authorized designee as reflected in the resolution, the awarded NOFA amount or your entity status has changed, you are required to provide, to the Department, a new resolution consistent with the terms of the NOFA award and adopted by your Board.

4. Return the e-signed copy or the signed hardcopy of the STD 213; and, if applicable, the certified resolution within 30 days from the date of this letter to the following address:

   Department of Housing and Community Development
   Business & Contract Services Branch
   Contracts Office, Attention: Viet Huu Hoai Luong
   2020 W. El Camino Avenue, Suite 130
   Sacramento, CA 95833

5. Maintain a complete electronic version of the STD 213 and Exhibits for your pending file. **Note: The Standard Agreement contract is not effective until it is signed by the Awardee's designated official and the Department**.

The Department reserves the right to cancel any pending Standard Agreement in its entirety if not returned within the required 30-day period.

Please contact Merritt Beckett, Homekey Program Manager, Program, Design & Implementation Branch, at (916)776-7788 or Merritt.Beckett@hcd.ca.gov, if you have any questions regarding the Standard Agreement or the provisions therein.

Sincerely,

Stephen Bedsworth
Stephen Bedsworth
Contracts Analyst

Enclosures
cc: Contracts Office, Contract Manager
Contract Representative

STATE OF CALIFORNIA - DEPARTMENT OF GENERAL SERVICES

STANDARD AGREEMENT

STD 213 (Rev. 04/2020)

SCO ID:

AGREEMENT NUMBER	PURCHASING AUTHORITY NUMBER (if applicable)
22-HK-17486	

1. This Agreement is entered into between the Contracting Agency and the Contractor named below:

CONTRACTING AGENCY NAME
DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT

CONTRACTOR'S NAME
Allied 39802 Cedar LLC, Allied Housing, Inc., and City of Newark

2. The term of this Agreement is:

START DATE
Upon HCD Approval

THROUGH END DATE
fifteen(15) Years from Effective Date

3. The maximum amount of this Agreement is:
$38,156,293.00

4. The parties agree to comply with the terms and conditions of the following exhibits, which are by this reference made a part of the Agreement.

EXHIBITS	TITLE	PAGES
Exhibit A	Authority, Purpose and Scope of Work	9
Exhibit B	Budget Detail and Payment Provisions	3
Exhibit C*	State of California General Terms and Conditions	GTC - 04/2017
Exhibit D	Homekey General Terms and Conditions	16
Exhibit E	Project-Specific Provisions and Special Terms and Conditions	9
	TOTAL NUMBER OF PAGES ATTACHED	37

Items shown with an asterisk (*), are hereby incorporated by reference and made part of this agreement as if attached hereto.
These documents can be viewed at https://www.dgs.ca.gov/OLS/Resources

IN WITNESS WHEREOF, THIS AGREEMENT HAS BEEN EXECUTED BY THE PARTIES HERETO.

CONTRACTOR

CONTRACTOR NAME (if other than an individual, state whether a corporation, partnership,etc.)
See Attached

CONTRACTOR BUSINESS ADDRESS	CITY	STATE	ZIP
See Attached	See Attached	See Attached	See Attached

PRINTED NAME OF PERSON SIGNING	TITLE
See Attached	See Attached

CONTRACTOR AUTHORIZED SIGNATURE	DATE SIGNED
See Attached	See Attached

STATE OF CALIFORNIA

CONTRACTING AGENCY NAME
Department of Housing and Community Development

CONTRACTING AGENCY ADDRESS	CITY	STATE	ZIP
2020 W. El Camino Ave., Suite 130	Sacramento	CA	95833

PRINTED NAME OF PERSON SIGNING	TITLE
Michael White	Contracts Manager, Business & Contract Services Branch

CONTRACTING AGENCY AUTHORIZED SIGNATURE	DATE SIGNED

California Department of General Services Approval (or exemption, if applicable)

Exempt per; SCM Vol. 1 4.04.A.3 (DGS memo dated 06/12/1981)

CONTRACTOR

Allied 39802 Cedar LLC
a California limited liability company

By: Allied Housing, Inc.
a California nonprofit public benefit corporation
Its: Sole Member/Manager

By: _____ Date: _____

Jonathan White
Chief Real Estate Officer

_____

Address:

40849 Fremont Blvd
Fremont, CA 94538

City of Newark
a California municipal corporation

By: _____ Date: _____

David J. Benoun
City Manager

_____

Address:

37101 Newark Boulevard
Newark, CA 94560

Allied Housing, Inc.
a California nonprofit public benefit corporation

By: _____ Date: _____

Jonathan White
Chief Real Estate Officer

_____

Address:

40849 Fremont Boulevard
Fremont, CA 94538

Prep Date: 08/10/2022

EXHIBIT A

AUTHORITY, PURPOSE AND SCOPE OF WORK

1. Authority

California Assembly Bill No. 140 (Chapter 111, Statutes of 2021) ("**AB 140**") added sections 50675.1.3 and 50675.1.4 to the Multifamily Housing Program ("**MHP**") (Chapter 6.7 (commencing with Section 50675) of Part 2 of Division 31 of the Health and Safety Code). Health and Safety Code section 50675.1.3 provides the statutory basis for the Homekey Program – Round 2 ("**Homekey**" or "**Program**"). Health and Safety Code section 50675.1, subdivision (d) authorizes the Department of Housing and Community Development ("**Department**" or "**HCD**") to administer MHP.

The Department issued a Homekey Program Notice of Funding Availability, Round 2 on September 9, 2021, which was subsequently amended on January 14, 2022 and May 5, 2022 (the "**NOFA**"). The NOFA incorporates by reference the MHP, as well as the Multifamily Housing Program Final Guidelines, dated June 19, 2019 ("**MHP Guidelines**"), both as amended and in effect from time to time. Homekey grant funds are derived primarily from the state's direct allocation of the federal Coronavirus State Fiscal Recovery Fund ("**CSFRF**"), which was established by the American Rescue Plan Act of 2021 ("**ARPA**") (Pub.L. No. 117-2). Homekey funds are also derived from the State of California's General Fund.

This STD 213, Standard Agreement ("**Agreement**") is entered under the authority and in furtherance of the Program. This Agreement is the result of an Application by the Grantee, as defined below, for funding under the Program (the "**Grant**"). As such, this Agreement shall be executed by the Grantee. Where the Grantee comprises a Public Entity or Tribal Entity, as defined below, and one or more additional entities, all entities shall execute the Agreement.

This Agreement hereby incorporates by reference the Application, as well as the project report prepared by the Department in reliance on the representations and descriptions included in that Application. This Agreement is governed by the following (collectively, the "**Program Requirements**"), and each of the following, as amended and in effect from time to time, is incorporated hereto as if set forth in full herein:

A. AB 140;

B. The above-referenced MHP statutory scheme;

C. The NOFA;

EXHIBIT A

D. The MHP Guidelines;

E. ARPA and related federal guidance;

F. The award letter issued by the Department to the Grantee; and

G. All other applicable law.

1. Purpose

The Homekey Program is intended to provide housing for individuals and families who are homeless or who are at risk of homelessness, as defined in Part 578.3 of Title 24 of the Code of Federal Regulations, and who are inherently impacted by or at increased risk for medical diseases or conditions due to the COVID-19 pandemic or other communicable diseases ("**Target Population**").

Grantee applied to the Department for the Grant in order to conduct one or more of the activities outlined in Paragraph 4 below. By entering into this Agreement and thereby accepting the award of Program Grant funds, the Grantee agrees to comply with the Program Requirements and the terms and conditions of this Agreement.

2. Definitions

Any capitalized terms that are not defined below shall have the definitions set forth in the NOFA, the MHP statutes, and the MHP Guidelines. In the event of any conflict, the definitions in this Agreement and the NOFA are controlling.

A. **"AMI"** means Area Median Income.

B. **"Application"** means the application for Grant funds that was submitted in response to the Department's NOFA.

C. **"Assisted Unit"** means a Homekey-funded residential dwelling unit that is subject to rent, income, occupancy, and other restrictions in accordance with Program Requirements. See also "**Youth Assisted Unit**."

D. **"Chronically Homeless"** is defined in accordance with Part 578.3 of Title 24 of the Code of Federal Regulations.

E. **"Co-Applicant"** means the nonprofit corporation, for-profit corporation, limited liability company, and/or limited partnership that applied for an award of Homekey Grant funds with the Eligible Applicant (i.e., a Public Entity or Tribal Entity).

EXHIBIT A

F. **"Designated Payee"** means the Co-Grantee that will serve as the payee of the Program Grant funds. If applicable, the Designated Payee is identified at Exhibit E of this Agreement.

G. **"Eligible Applicant"** means the Public Entity or Tribal Entity that applied for an award of Homekey Grant funds.

H. **"Eligible Uses"** means the activities that may be funded by the Homekey Program Grant. Those activities are listed at Paragraph 4 of this Agreement, and at Health and Safety Code section 50675.1.3, subdivision (a).

I. **"Expenditure Deadline for Capital Funds"** means the date by which the capital expenditure award must be fully expended. This deadline is eight (8) months from the date of the Grantee's award unless the Department has approved an alternate arrangement in advance and in writing.

J. **"Expenditure Deadline for Operating Funds"** means the date by which the operating subsidy award must be fully expended. This deadline is **June 30, 2026**.

K. **"Grantee"** means the Eligible Applicant (and, if applicable, the Co-Applicant) that has been awarded funds under the Program, and that will be held responsible for compliance with and performance of all Program Requirements. The Grantee may comprise one or more entities, so long as the Grantee structure includes an "Eligible Applicant," as defined in the NOFA and as set forth above. "**Grantee**" refers, both individually and collectively, to the Co-Applicant and/or the Eligible Applicant that received a Homekey Grant after submitting an Application or a joint Application to the Department. When the Grantee comprises two or more entities, each entity may be referred to as a "**Co-Grantee**." On the STD 213 portion of this Agreement, the Grantee is identified as the Contractor.

L. **"Homeless Youth"** means a child, youth, or current or former foster youth through the age of 25 who qualifies as "homeless" under any of the relevant definitions set forth or identified at Part 578.3 of Title 24 of the Code of Federal Regulations.

M. **"Homeless Youth Project"** means a Project that was prioritized to receive set-aside Homekey funds because **(i)** at least 25 percent of its Assisted Units will be restricted to Homeless Youth or Youth at Risk of Homelessness; **(ii)** the Grantee jointly applied and/or partnered with a nonprofit corporation with experience serving the foregoing subpopulation; and **(iii)** the Project is in reasonable proximity to youth-centered amenities, such as community colleges, universities, trade schools, apprenticeship programs, employment programs, childcare centers for parenting youth, and community centers for youth. Alternatively, "**Homeless Youth Project**" means a Project that was prioritized to receive set-aside Homekey funds because it

EXHIBIT A

will provide Supportive Services for Youth Assisted Units using a Positive Youth Development (PYD) model and trauma-informed care.

N. **"Interim Housing"** or **"Transitional Housing"** means any facility that is primarily intended to provide temporary shelter or lodging for the Target Population, and which does not require occupants to sign leases or occupancy agreements, or to pay any rent, fees, or charges.

O. **"Local Public Entity"** is defined at Health and Safety Code section 50079, and means any county, city, city and county, the duly constituted governing body of an Indian reservation or rancheria, tribally designated housing entity as defined in Section 4103 of Title 25 of the United States Code and Section 50104.6.5, redevelopment agency organized pursuant to Part 1 (commencing with Section 33000) of Division 24, or housing authority organized pursuant to Part 2 (commencing with Section 34200) of Division 24, and also includes any state agency, public district, or other political subdivision of the state, and any instrumentality thereof, that is authorized to engage in or assist in the development or operation of housing for persons and families of low or moderate income. In addition, and in accord with this Health and Safety Code definition, the term "**Local Public Entity**" also includes two or more local public entities acting jointly.

P. **"Performance Milestones"** means the indicators and metrics of progress and performance that are identified as such at Exhibit E of this Agreement. Grantee's failure to satisfy any one of the Performance Milestones will constitute a breach of this Agreement and will entitle the Department to exercise any and all available remedies, including the recapture of disbursed Grant funds and the cancellation of this Agreement.

Q. **"Permanent Housing"** means housing, dwellings, or other living accommodations where the landlord does not limit the tenant's length of tenancy, the landlord does not restrict the tenant's movements, and the tenant has a lease and is subject to the rights and responsibilities of tenancy.

R. **"Program Requirements"** means the legal authority and Program materials listed at Paragraph 1.A – G, above.

S. **"Project"** means a structure or set of structures with common financing, ownership, and management and which provides Permanent Housing, Interim Housing, or Transitional Housing for the Target Population.

T. **"Public Entity"** is defined in accordance with Health and Safety Code section 50675.1.3, subdivision (a), and means a city, a county, a city and county, and any

EXHIBIT A

other state, regional, or Local Public Entity, including any council of government, metropolitan planning organization, and regional transportation planning agency designated in Section 29532.1 of the Government Code. For purposes of this Agreement, a "**Local Public Entity**" is defined in accordance with Health and Safety Code section 50079 and as set forth above.

U. **"Scope of Work"** or **"Work"** means the work to be performed by the Grantee to accomplish the Program purpose.

V. **"Supportive Services"** means social, health, educational, income support, employment, and housing stability services and benefits; coordination of community building and educational activities; individualized needs assessment and case management; and individualized assistance with obtaining services and benefits.

W. **"Target Population"** means individuals and families who are "homeless" or "at risk of homelessness," as those terms are defined in Part 578.3 of Title 24 of the Code of Federal Regulations, and who are inherently impacted by or at increased risk for medical diseases or conditions due to the COVID-19 pandemic or other communicable diseases.

X. **"TCAC"** means the California Tax Credit Allocation Committee.

Y. **"Tribal Entity"** means an entity that meets any of the following criteria:

i. Meets the definition of Indian tribe under section 4103(13)(B) of title 25 of the United States Code;
ii. Meets the definition of Tribally Designated Housing Entity under section 4103(22) of title 25 of the United States Code;
iii. Is not a federally recognized tribe, but is either:
    I. Listed in the petitioner list of the Office of Federal Acknowledgment (OFA) within the Office of the Assistant Secretary – Indian Affairs of the Department of the Interior pursuant to Part 82.1 of Title 25 of the Code of Federal Regulations; or
    II. Is an Indian tribe located in the State of California and identified on the contact list maintained by the Native American Heritage Commission for the purpose of consultation pursuant to Government Code section 65352.3.

Z. **"Youth Assisted Unit"** means an Assisted Unit serving Homeless Youth or Youth at Risk of Homelessness. See also "**Assisted Unit**."

EXHIBIT A

AA. **"Youth at Risk of Homelessness"** means a child, youth, or current or former foster youth through the age of 25 who qualifies as "at risk of homelessness" or "homeless" under any of the relevant definitions set forth or identified at Part 578.3 of Title 24 of the Code of Federal Regulations.

3. Eligible Uses

Grantee shall apply the Program Grant funds to one or more of the following uses. All costs in connection with such Eligible Uses must be incurred on or after March 3, 2021, by the Expenditure Deadline for Capital Funds, and by the Expenditure Deadline for Operating Funds, respectively and as applicable. Grantee's use of the funds and scope of work ("**Scope of Work**" or "**Work**") are specified at Exhibit E of this Agreement.

A. Acquisition or rehabilitation, or acquisition and rehabilitation, of motels, hotels, hostels, or other sites and assets, including apartments or homes, adult residential facilities, residential care facilities for the elderly, manufactured housing, commercial properties, and other buildings with existing uses that could be converted to permanent or interim housing.

B. Master leasing of properties for non-congregate housing.

C. Conversion of units from nonresidential to residential.

D. New construction of dwelling units.

E. The purchase of affordability covenants and restrictions for units.

F. Relocation costs for individuals who are being displaced as a result of the Homekey Project.

G. Capitalized operating subsidies for units purchased, converted, or altered with Homekey Grant funds provided pursuant to Health and Safety Code section 50675.1.3.

4. Rent Standards

Permanent Housing. Rent limits for initial occupancy, and for each subsequent occupancy, of an Assisted Unit shall not exceed 30 percent of that Assisted Unit's designated income-eligibility level.

Interim Housing, Transitional Housing. No rent shall be charged to the Target Population residents of Interim Housing or Transitional Housing.

EXHIBIT A

5. Program Deadlines

For Projects that involve acquisition, the Grantee shall expend any capital expenditure award and the Project escrow must be closed by the Expenditure Deadline for Capital Funds.

For Projects that involve construction and/or rehabilitation, the Grantee shall expend any capital expenditure award by the Expenditure Deadline for Capital Funds and complete any construction or rehabilitation activities within twelve (12) months of the date of the award.

All acquisition-only Projects shall achieve full occupancy of the Assisted Units within ninety (90) calendar days of the Expenditure Deadline for Capital Funds. Otherwise, Projects shall achieve full occupancy of the Assisted Units within ninety (90) calendar days of construction and/or rehabilitation completion. For purposes of this paragraph, "full occupancy" means fully occupied with consideration for an average 10 percent vacancy rate at any given time.

Projects that received a bonus award for expedited occupancy shall achieve full occupancy within eight (8) months of the date of the award. For purposes of this paragraph, "full occupancy" means fully occupied with consideration for an average 10 percent vacancy rate at any given time. No bonus award shall be granted for expedited occupancy if the Grantee requests and the Department approves an extension for full occupancy.

Grantee may ask the Department for an extension to complete construction and/or rehabilitation, where the Grantee clearly demonstrates that the extension is due to circumstances or conditions beyond the Grantee's control, and that granting the extension will enable the construction and/or rehabilitation to be completed and full occupancy of the Assisted Units to be achieved. Where the Department grants an extension for completion of construction and/or rehabilitation, the Expenditure Deadline for Capital Funds and the deadline for full occupancy of the Assisted Units may also be extended within the constraints of applicable law.

Grantee shall expend any Homekey-funded operating subsidy award by the Expenditure Deadline for Operating Funds.

6. Performance Milestones

Grantee shall complete each of the Performance Milestones set forth at Exhibit E of this Agreement by the date designated for such completion therein (each, a "**Milestone Completion Date**"). The Performance Milestones shall include, but not be limited to,

EXHIBIT A

any applicable Expenditure Deadline for Capital Funds, Expenditure Deadline for Operating Funds, occupancy deadline, or expedited occupancy deadline.

Grantee may apply to the Department for an extension of any such Milestone Completion Date. Approval of any such extension request shall be in the Department's reasonable discretion. In no event will the Department approve an extension request in the absence of Grantee's demonstration of good cause for said extension, along with Grantee's reasonable assurances that the extension will not result in Grantee's failure to meet other Performance Milestones or any Expenditure Deadline under this Agreement.

7. Reporting Requirements

Grantee shall submit an annual Homekey Program and Expenditure Report, a nd comply with all additional reporting requirements, as set forth and specified at Section 601 of the NOFA, all in accordance with the Milestone Completion Date(s) set forth at Exhibit E of this Agreement.

After satisfaction of each Performance Milestone, the Grantee shall promptly report its progress, in writing, to the Department.

Upon the Department's request and as specified, the Grantee shall provide progress reports in connection with the development plan and any updates to the timeline for completion of the Project. The development plan should include the Project's completion milestones and any updates or substantial changes.

In addition, the Grantee shall submit to the Department such periodic reports, updates, and information as deemed necessary by the Department to monitor compliance and/or perform Program evaluation. Any requested data or information shall be submitted in electronic format on a form provided by the Department.

Grantee shall, at the request of the Department, report back on any racial equity strategies described in the Homekey Application.

8. Department Contract Coordinator

The Department's Contract Coordinator for this Agreement is the Deputy Director of the Division of State Financial Assistance, or the Deputy Director's designee. Unless otherwise informed, Grantee shall mail any notice, report, or other communication required under this Agreement by First-Class Mail to the Department Contract Coordinator at the following address or email to Homekey2SGM@hcd.ca.gov:

EXHIBIT A

California Department of Housing and Community Development
Attention: Homekey Program – Round 2 (Homekey)
State Grant Management Section
2020 West El Camino Avenue, Suite 400, 95833
P. O. Box 952050
Sacramento, CA 94252-2050

9. Grantee Contract Coordinator

The Grantee Contract Coordinator for this Agreement may coordinate with the State Grant Management Section Manager for the Homekey Program. Unless otherwise informed, the Department shall mail any notice, report, or other communication required under this Agreement by First-Class Mail, or through a commercial courier, to the Grantee Contract Coordinator at the address specified at Exhibit E of this Agreement.

EXHIBIT B

BUDGET DETAIL AND PAYMENT PROVISIONS

1. Budget Detail

Grantee has been awarded the Grant amount set forth in this Agreement.

2. Conditions of Disbursement

The Department will disburse the full amount of the Grant award to the Grantee after this Agreement has been fully executed and after the Department receives the Grantee's request for funds, with all required supporting documents appended thereto. The Grantee shall append the following supporting documents to the request for funds, all in form and substance acceptable to the Department:

A. Payee Data Record (STD 204) or Government Agency Taxpayer ID Form, as applicable;

B. An authorizing resolution or set of authorizing resolutions that, in the Department's reasonable determination, materially comports with the Program Requirements (if the Grantee has not already submitted same);

C. Documentary evidence of any eligible costs incurred on or after March 3, 2021 and before the execution of this Agreement;

D. Certification of compliance with California's prevailing wage law, as well as all applicable federal prevailing wage law;

E. A copy of the Department-approved relocation plan for the Project, or a copy of a Department-issued Certification Regarding Non-Application of Relocation Benefits and Indemnification Agreement, which has been duly executed by the Grantee and approved by the Department;

F. Evidence of the insurance coverages required under the Program and/or a written acknowledgment of self-insured status;

G. Documentary evidence of capacity to provide operating funds for the Project for at least five (5) years;

H. A current title report (dated within 15 days of the request for funds); or for tribal trust land, a title status report ("**TSR**") or an attorney's opinion regarding chain of title and current title status;

EXHIBIT B

I. Any forms, certifications, or documentation required pursuant to Paragraph 5– Additional Conditions Precedent to Disbursement of Exhibit E of this Agreement; and

J. Any other forms, certifications, or documentation deemed necessary by the Department prior to disbursement of Grant funds.

3. Performance

After disbursement of the funds, the Grantee shall meet each Performance Milestone set forth at Exhibit E by the relevant Milestone Completion Date. After satisfaction of each Performance Milestone, the Grantee shall promptly report its progress, in writing, to the Department. Grantee may apply to the Department for an extension of any Milestone Completion Date based on good cause shown and best efforts and assurances from the Recipient for timely completion of the remaining Performance Milestones.

FAILURE TO SATISFY ANY ONE OF THE PERFORMANCE MILESTONES WILL CONSTITUTE A BREACH OF THIS AGREEMENT AND ENTITLES THE DEPARTMENT TO MANDATE THE GRANTEE TO RETURN TO THE DEPARTMENT ANY FUNDS DISBURSED; IN ANY SUCH INSTANCE, THE DEPARMENT MAY ALSO CANCEL THIS AGREEMENT WITHOUT OWING ANY DAMAGES OR OTHER PAYMENT TO GRANTEE.

4. Fiscal Administration

A. Grantee shall either deposit the Grant funds with an escrow company licensed to do business in the State of California and in good standing or deposit the Grant funds in an interest-bearing checking or savings account insured by the federal or state government. All interest earned from the deposit of Grant funds shall be used for eligible Program activities.

B. Any capital expenditure award funds that have not been expended by the Expenditure Deadline for Capital Funds must be returned to the Department with accrued interest. Any operating subsidy award funds that have not been expended by the Expenditure Deadline for Operating Funds must be returned to the Department with accrued interest. Checks shall be made payable to the Department of Housing and Community Development and shall be mailed to the Department at the address below, no later than thirty (30) calendar days after the applicable Expenditure Deadline.

EXHIBIT B

Department of Housing and Community Development
Accounting Division, Suite 300
2020 W. El Camino Avenue
Sacramento, California 95833

5. Duplication of Benefit

Homekey funding is not required to be used as funding of last resort. However, Grantee may not use Homekey funding to cover expenditures that have already been funded through other sources. Expenses that have been or will be reimbursed under any federal program are not eligible uses of Homekey funding.

EXHIBIT D

HOMEKEY GENERAL TERMS AND CONDITIONS

1. Effective Date, Term of Agreement, Timing, and Deadlines

A. This Agreement, when fully executed by the Department and the Grantee, is effective upon the date of the Department representative's signature on the STD 213, Standard Agreement (such date, the "**Effective Date**").

B. This Agreement shall terminate fifteen (15) years after the Effective Date, as stated in Paragraph 2 of the STD 213, Standard Agreement (such date, the "**Expiration Date**").

C. Grantee will receive the disbursement of Program funds after satisfying all conditions precedent to such disbursement, as set forth under Paragraph 2 of Exhibit B and, as necessary and applicable, under Paragraph 5 – Additional Conditions Precedent to Disbursement of Exhibit E.

D. Any expenses incurred prior to March 3, 2021, after the Expenditure Deadline for Capital Funds, or after the Expenditure Deadline for Operating Funds, respectively and as applicable, are not eligible for payment under the Program, unless an alternate arrangement is legally permissible and has been approved by the Department in advance and in writing.

E. Grant funds that have not been expended by the applicable Expenditure Deadlines shall revert to the Department in the absence of an alternate arrangement that has been approved by the Department in advance and in writing.

2. Termination for Cause

The Department may terminate this Agreement for cause at any time by giving at least fourteen (14) calendar days' advance written notice to the Grantee. Upon such termination, Grantee shall return any unexpended funds to the Department within thirty (30) calendar days of the date on the Department's written notice of termination, unless the Department has approved an alternate arrangement in advance and in writing, as provided below. Such termination will not limit any other remedies that may be available to the Department under this Agreement, at law, or

EXHIBIT D

in equity. Cause shall consist of Grantee's breach of, or failure to satisfy, any of the terms or conditions of this Agreement. Cause includes but is not limited to the following:

A. Grantee's failure to satisfy the conditions precedent to disbursement or to expend Program Grant funds, as specified.

B. Grantee's failure to timely satisfy each or any of the conditions set forth in these Homekey General Terms and Conditions, the Project-Specific Provisions and Special Terms and Conditions set forth at Exhibit E of this Agreement (including any one of the Performance Milestones), or the award letter.

C. Grantee's violation of any of the Program Requirements.

D. The Department's determination of the following:

1) Any material fact or representation, made or furnished to the Department by the Grantee in connection with the Application or the award letter, shall have been untrue or misleading at the time that such fact or representation was made known to the Department, or subsequently becomes untrue or misleading; or

2) Grantee has concealed any material fact from the Department related to the Application or the Project.

E. The Department's determination that the objectives and requirements of the Homekey Program cannot be met in accordance with applicable timeframes, as memorialized by this Agreement.

In the event of this or any other breach, violation, or default by the Grantee, the Department may give written notice to the Grantee to cure the breach, violation, or default. If the breach, violation, or default is not cured to the Department's satisfaction within a reasonable time, as determined by the Department in its sole and absolute discretion, then the Department may declare a default under this Agreement and seek any and all remedies that are available under this Agreement, at law, or in equity.

EXHIBIT D

3. Cancellation

A. It is mutually understood between the parties that this Agreement may have been written for the mutual benefit of both parties before ascertaining the availability of congressional appropriation of funds to avoid program and fiscal delays that would occur if this Agreement were executed after that determination was made.

B. This Agreement is valid and enforceable only if sufficient funds are made available to the State of California by the United States Government for fiscal years 2021-2022 through 2025-2026 for CSFRF purposes. In addition, this Agreement is subject to any additional restrictions, limitations, or conditions enacted by the Congress or to any statute enacted by the Congress that may affect the provisions, terms, or funding of this Agreement in any manner.

C. The parties mutually agree that if the Congress does not appropriate sufficient funds for the CSFRF, this Agreement shall be amended to reflect any subsequent reduction in CSFRF funds.

D. The Department may cancel this Agreement, in whole or in part, if **(i)** sufficient funds are not made available by the United States Government; **(ii)** Congress enacts any restrictions, limitations, or conditions that impact this Agreement or the funding of this Agreement; or **(iii)** cancellation is otherwise permitted under state contracting law.

E. To cancel this Agreement pursuant to this paragraph, the Department shall give thirty (30) calendar days' advance written notice to the Grantee. The Locality shall return any undisbursed portion of its Grant award to the Department within thirty (30) calendar days from the date on the Department's written notice of cancellation, unless **(i)** the parties have agreed upon an alternate arrangement in advance and in writing; or **(ii)** an alternate arrangement is necessary for one or both parties to remain in compliance with ARPA or other applicable law.

4. Eligible Activities

Grant funds awarded to the Grantee shall be applied to the eligible uses set forth at Exhibit A and described in greater detail at Exhibit E. Payment for any cost which is not authorized by this Agreement or which cannot be adequately documented shall be disallowed and must be reimbursed to the Department or its designee.

EXHIBIT D

5. Performance Milestones

Grantee shall timely satisfy and complete all Performance Milestones, as identified at Exhibit E of this Agreement.

6. Article XXXIV

Per Health and Safety Code section 37001, subdivision (h)(2), article XXXIV, section 1 of the California Constitution ("**Article XXXIV**") is not applicable to development that consists of the acquisition, rehabilitation, reconstruction, alterations work, new construction, or any combination thereof, of lodging facilities or dwelling units using moneys received from CSFRF established by ARPA. As such, Article XXXIV is not applicable to Homekey-funded development, construction, or acquisition.

7. Appraisals

Grantee shall, at the request of the Department, provide an appraisal of any real property or any interest in real property that is acquired with the Grant funds. Any such appraisal shall be prepared in a form, and by a qualified appraiser, acceptable to the Department.

8. Compliance with Prevailing Wage Law

Grantee's Project is subject to state and federal prevailing wage law. Grantee is urged to seek professional legal advice about prevailing wage law requirements and Grantee's potential obligations thereunder. Prior to disbursing the Grant funds, the Department will require a certification of compliance with California's prevailing wage law, as well as all applicable federal prevailing wage law. The certification must verify that prevailing wages have been or will be paid if such payment is required by law, and that labor records will be maintained and made available to any enforcement agency upon request. The certification must be signed by Grantee and its general contractor(s).

9. Environmental Conditions

Grantee shall provide a Phase I Environmental Site Assessment ("**ESA**") for the Project, in conformance with ASTM Standard Practice E 1527, evaluating whether the Project is affected by any recognized environmental conditions. If the Phase I ESA discloses evidence of recognized environmental conditions and Grantee desires to proceed with the Project, the Grantee shall provide the Department with a

EXHIBIT D

Phase II report and any additional reports as required by the Department and in a form acceptable to the Department. Any remediation work shall be subject to Department approval. Grantee shall also provide an asbestos assessment and a lead-based paint report for the Department's approval if the Project involves rehabilitation or demolition of existing improvements.

10. Insurance

Grantee shall obtain the insurance coverages identified in the NOFA. Grantee shall maintain such insurance coverages for either the term of this Agreement or the term of any required restrictive covenant or regulatory agreement, whichever applicable term is longer. Grantee shall name the State of California and the Department, as well as their respective appointees, officers, agents, and employees, as additional insureds on all such policies. Such policies shall provide for notice to the Department in the event of any lapse of coverage or insurance claim thereunder. Prior to disbursement of any Grant funds, Grantee shall provide evidence satisfactory to the Department of its compliance with these insurance requirements.

If Grantee is self-insured, in whole or in part, as to any of the required types and levels of coverage, the Grantee shall provide the Department with a written acknowledgment of its self-insured status prior to disbursement of any Grant funds. If the Grantee abandons its self-insured status at any time after execution of this Agreement, the Grantee shall immediately notify the Department, and shall promptly comply with the insurance coverage requirements under the Program.

11. Operating Funds

Grantee shall demonstrate its capacity to provide five (5) years of operating funds for the Project. As set forth at Exhibit B of this Agreement, Grantee shall provide documentary evidence of such capacity prior to disbursement of any Grant funds.

12. Relocation

Grantee must comply with all applicable federal, state, and local relocation law. Pursuant to relocation law, a Grantee must have a relocation plan prior to proceeding with any phase of a Project or other activity that will result in the displacement of persons, businesses, or farm operations. To ensure that displaced persons and entities do not suffer a disproportionate impact as a result of Projects which benefit the public, all notices to vacate and relocation services must be provided to them in accordance with applicable law. In addition, before the Homekey

EXHIBIT D

award will be disbursed, Grantee must have either:

A. A Department-approved relocation plan; or

B. A Department-issued Certification Regarding Non-Application of Relocation Benefits and Indemnification Agreement, which has been duly executed by the Grantee and approved by the Department.

13. One-for-One Replacement of Assisted Units

One-for-one replacement of Assisted Units is permissible if approved in advance by the Department per Section 301 of the NOFA, after the Department's determination, in its sole and absolute discretion, that such replacement will not reduce the inventory of units that are already available at affordable rents to households that are at or under 30 percent AMI.

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14. Site Control

Unless and except as otherwise expressly approved in writing by the Department or provided at Exhibit E to this Agreement, the Grantee shall have control of the property at all times, and such control shall not be contingent on the approval of any other party. The status and nature of the Grantee's title and interest in the property must be acceptable to the Department. Site control may be evidenced by one of the following:

A. Fee title.

B. A leasehold interest on the property with provisions that enable the lessee to make improvements on and encumber the property provided that the terms and conditions of any proposed lease shall permit compliance with, and satisfaction of, all program objectives and requirements, including, without limitation, those set forth in this Agreement. If the Grantee's interest in the property is a leasehold, and the lessee and the lessor are affiliated or related parties, then the Department may require that both the lessee and the lessor must execute this Agreement.

C. An executed disposition and development agreement, or irrevocable offer of dedication to a public agency.

EXHIBIT D

D. A sales contract, or other enforceable agreement for the acquisition of the property. If this form of evidence was relied upon at the time of Application, the Department may impose additional Performance Milestones (e.g., presentation of additional or supplemental evidence of eventual site control closer to any projected close of escrow).

E. A letter of intent, executed by a sufficiently authorized signatory of the Grantee, that expressly represents to the Department, without condition or reservation, that, upon successful application, the Grantee shall purchase or otherwise acquire a sufficient legal interest in the property to accomplish the purpose of the award. The letter of intent must also be duly acknowledged by the party selling or otherwise conveying an interest in the subject property to the Grantee. If this form of evidence was relied upon at the time of Application, the Department may impose additional Performance Milestones (e.g., presentation of additional or supplemental evidence of eventual site control closer to any projected close of escrow).

F. Other evidence of site control that gives the Department assurance (equivalent to A-E above) that the Grantee will be able to complete the Project in a timely manner and in accordance with the Program's objectives and requirements, including, without limitation, those set forth or referenced in this Agreement.

15. Adaptability and Accessibility

The Project shall comply with all applicable federal, state and local laws regarding adaptability and accessibility, including, without limitation, the requirements set forth in the NOFA.

16. Title Status and Reports

Grantee shall provide a current title report for the real property on which the Project is located. If Grantee's interest in the property is leasehold, then Grantee shall provide a current title report for the leasehold interest and the fee interest. For tribal trust land, Grantee shall provide a TSR or an attorney's opinion regarding chain of title and current title status. As set forth and specified at Exhibit B of this Agreement, Grantee shall provide such title report or documentation of title status prior to disbursement of any Homekey Grant funds.

EXHIBIT D

17. Title Insurance

Grantee shall provide evidence of title insurance and an ALTA As-Built Survey that are acceptable to the Department. The condition of title, the insurer, the liability amount, the form of policy, and the endorsements shall be subject to Department approval. The policy shall insure that Grantee holds good and marketable title (fee simple or leasehold).

18. Property Management Plan

Grantee shall submit a property management plan to the Department for its review and approval. Such management plan shall be consistent with any representations made in the Application, and it shall meet the Program Requirements (e.g., include the management, maintenance, and repair information required by the MHP Guidelines).

19. Supportive Services Plan

Grantee shall submit a Supportive Services plan to the Department for its review and approval. Such Supportive Services plan shall be consistent with any representations made in the Application, and it shall meet the Program Requirements (e.g., provide for delivery of housing stability services and benefits).

20. Compliance with Title VI of the Civil Rights Act of 1964

Grantee and any of its contractors, subcontractors, successors, transferees, and assignees shall comply with Title VI of the Civil Rights Act of 1964, which prohibits recipients of federal financial assistance from excluding from a program or activity, denying benefits of, or otherwise discriminating against a person on the basis of race, color, or national origin (42 U.S.C. § 2000d et seq.), as implemented by the U.S. Department of the Treasury's Title VI regulations, 31 CFR Part 22, which are herein incorporated by reference and made a part of this Agreement. Title VI also includes protection to persons with "Limited English Proficiency" in any program or activity receiving federal financial assistance, 42 U.S.C. § 2000d et seq., as implemented by the U.S. Department of the Treasury's Title VI regulations, 31 CFR Part 22, and herein incorporated by reference and made a part of this Agreement.

EXHIBIT D

21. Nondiscrimination

Statutes and regulations prohibiting discrimination are applicable to this Agreement and include, without limitation, the following:

A. Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq.) and the U.S. Department of the Treasury's implementing regulations at 31 CFR Part 22;

B. The Fair Housing Act, Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.);

C. Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794);

D. The Age Discrimination Act of 1975, as amended (42 U.S.C. § 6101 et seq.);

E. Title II of the Americans with Disabilities Act of 1990, as amended (42 U.S.C. § 12101 et seq.); and

F. The State of California nondiscrimination statutes, regulations, and standards set forth and identified in the NOFA and at Exhibit C of this Agreement.

Grantee shall adopt a written nondiscrimination policy requiring that no person shall, on the grounds of race, color, religion, sex, gender, gender identity, gender expression, sexual orientation, marital status, national origin, ancestry, familial status, source of income, disability, age, medical condition, genetic information, citizenship, primary language, immigration status (except where explicitly prohibited by federal law), arbitrary characteristics, and all other classes of individuals protected from discrimination under federal or state housing laws, individuals perceived to be a member of any of the preceding classes, or any individual or person associated with any of the preceding classes, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity funded in whole or in part with Homekey funds.

EXHIBIT D

22. Affirmative Fair Housing Marketing Plan and Fair Housing Compliance

Grantee shall develop and implement an affirmative fair housing marketing plan that is satisfactory to the Department. Appropriate aspects of the initial plan shall be incorporated into the ongoing management plan to ensure positive outreach and informational efforts to those who are least likely to know about and apply for Interim Housing, Transitional Housing, or Permanent Housing. Grantee is encouraged to refer to the guidelines for Affirmative Fair Housing Marketing Plans issued by the U.S. Department of Housing and Urban Development ("**HUD**"). Grantee shall comply with all applicable state and federal fair housing laws.

23. Grantee Acknowledgment of the Pet Friendly Housing Act of 2017

By executing this Agreement, Grantee acknowledges that the Pet Friendly Housing Act of 2017 (Health & Saf. Code, § 50466) requires each housing development, if it is financed on or after January 1, 2018 pursuant to Division 31 of the Health and Safety Code, to authorize a resident of the housing development to own or otherwise maintain one or more common household pets within the resident's dwelling unit, subject to applicable state laws and local governmental ordinances related to public health, animal control, and animal anticruelty.

24. Final Certificate of Occupancy

Grantee shall provide a final certificate of occupancy (or an equivalent form of occupancy certification or approval) issued by the local agency having jurisdiction over such certificates.

25. Occupancy

The Assisted Units shall be occupied by the Target Population, and such units shall be in decent, safe, and sanitary condition at the time of their occupancy. In addition, the Grantee shall certify, upon occupancy, that it will employ the core components of Housing First (as set forth at Welfare and Institutions Code section 8255) as part of its property management plan and Supportive Services plan.

26. Tenant Selection

Referrals to Assisted Units shall be made through the local Coordinated Entry System ("**CES**"), or another comparable prioritization system based on greatest need shall be used. All referral protocols for Assisted Units shall be developed in

EXHIBIT D

collaboration with the local Continuum of Care and implemented consistent with the Program Requirements.

27. Participation in Statewide HDIS/HMIS

Grantee shall support Continuum of Care participation in the statewide Homeless Data Integration System ("**HDIS**"). As required by and in accordance with state and federal law (including all applicable privacy law), Grantee shall further disclose relevant data to the local Homeless Management Information System ("**HMIS**") and comparable data collection systems.

28. Restrictive Covenants and Regulatory Agreements

A restrictive covenant, regulatory agreement, or similar use restriction shall be recorded against the Project real property, depending on the Project type. For Interim Housing or Transitional Housing Projects that will not result in Permanent Housing, the Department will prepare, and the Public Entity shall cause, a 15-year restrictive covenant to be recorded against the Project real property. For Interim Housing or Transitional Housing Projects that will ultimately result in Permanent Housing, the Public Entity or Tribal Entity shall prepare and cause a 15-year restrictive covenant to be recorded against the Project real property. For Permanent Housing Projects, the Public Entity or Tribal Entity shall prepare and cause a 55-year regulatory agreement to be recorded against the Project real property. For Permanent Housing Projects located on tribal trust land, a 50-year use restriction shall be recorded against the Project real property.

All use restrictions shall require integration of the Target Population within all entrances, common areas, and buildings that comprise the Project.

All use restrictions shall include occupancy and rent restrictions that maintain the Project's accessibility to the Target Population over the full term of the use restriction.

All use restrictions are subject to the advance written approval of the Department, and shall be acceptable to the Department in form, substance, and priority. Project-specific requirements and deadlines are set forth at Exhibit E of this Agreement.

29. Restrictions on Sales, Transfers, and Encumbrances

Grantee shall not, for the duration of this Agreement, sell, assign, transfer, or convey

EXHIBIT D

the Project, or any interest therein or portion thereof, without the express prior written approval of the Department.

30. Retention, Inspection, and Audit of Records

Grantee is responsible for maintaining records which fully disclose the activities funded by the Grant. Grantee shall retain all records for a period of five (5) years after the expiration of this Agreement, unless a longer retention period is stipulated. If any litigation, claim, negotiation, audit, monitoring, inspection or other action commences during this required retention period, all records must be retained until a full and final resolution of the action.

The Department, as well as its appointees, employees, agents, and delegatees, shall have the right to review, obtain, and copy all records pertaining to performance under this Agreement. The U.S. Department of the Treasury and any authorized oversight body or representative, including, without limitation, the Treasury's Office of Inspector General, the Government Accountability Office, and the Pandemic Relief Accountability Committee, shall have the right of access to such records in order to conduct audits or other investigations. Grantee shall provide any relevant information requested, and shall permit access to its premises, upon reasonable notice and during normal business hours, for the purpose of interviewing employees and inspecting and copying books, records, accounts, and other relevant material.

At any time during the term of this Agreement, the Department may perform or cause to be performed a financial audit of any and all phases of the Project. At the Department's request, the Grantee shall provide, at its own expense, a financial audit prepared by a certified public accountant. The audit shall be performed by a qualified state, local, independent, or Department auditor. Where an independent auditor is engaged, the audit services agreement shall include a clause which permits the Department to have access to the independent auditor's relevant papers, records, and work product.

If there are audit findings, the Grantee shall submit a detailed response to the Department for each audit finding. The Department will review the response. If the Department determines, in its sole and absolute discretion, that the response is satisfactory, the Department will conclude the audit process and notify the Grantee in writing. If the Department determines, in its sole and absolute discretion, that the response is not satisfactory, the Department will contact the Grantee, in writing, and explain the action required to cure any audit deficiencies. Such action could include the repayment of ineligible costs or other remediation.

EXHIBIT D

If so, directed by the Department upon the termination or expiration of this Agreement, the Grantee shall deliver all records, accounts, documentation, and other materials that are relevant to this Agreement to the Department as depository.

31. Site Inspection

The Department reserves the right, upon reasonable notice, to inspect the Project to determine whether it meets the Program Requirements. If the Department reasonably determines that the site is not acceptable for the Project in accordance with the Program Requirements, the Department reserves the right to rescind the award and the Grant. Nothing in this paragraph is intended to create or imply any obligation of the Department to inspect the Project.

32. Compliance with State and Federal Laws, Rules, Guidelines, and Regulations

Grantee agrees to comply with all state and federal laws, rules, guidelines, and regulations that are applicable to the Project, including those that pertain to construction, health and safety, labor, fair employment practices, and equal opportunity.

33. Updated Information

If there is any change in the information that has been provided to the Department, Grantee shall promptly provide the Department with updated documentation (e.g., updated sources and uses). All changes shall be subject to Department approval. In addition, Grantee shall promptly notify the Department, in writing, of any changes in Grantee or Co-Grantee organization, authorization, or capacity.

34. Survival of Obligations

The obligations of the Grantee, as set forth in this Agreement, shall survive the termination or expiration of this Agreement.

35. Litigation

Grantee shall notify the Department immediately of any claim or action undertaken by or against it which affects or may affect this Agreement or the Department and shall take such action with respect to the claim or action as is consistent with the terms of this Agreement, the Program Requirements, the interests of the

EXHIBIT D

Department, and the objectives of the Homekey Program.

36. Entire Agreement; Severability

This Agreement constitutes the entire agreement between the Grantee and the Department. All prior representations, statements, negotiations and undertakings with regard to the subject matter hereof are superseded hereby. If any term or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be invalid or unenforceable, the remaining terms and provisions of this Agreement, or the application of such terms or provisions to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each term and provision of this Agreement shall be valid and enforced to the fullest extent permitted by law.

37. Modification or Waiver under AB 1010

The Department reserves the right to waive or modify any requirement under this Agreement, or any Program Requirement, as authorized by and in accordance with Assembly Bill No. 1010 (Chapter 660, Statutes of 2019) ("**AB 1010**"), which is codified at Health and Safety Code section 50406, subdivision (p).

38. Waivers

No waiver of any breach, violation, or default under this Agreement shall be held to be a waiver of any other or subsequent breach or violation thereof or default thereunder. The Department's failure, at any time, to enforce the provisions of this Agreement or to require the Grantee's performance under this Agreement shall in no way be construed as a waiver of such provisions or performance, and it shall not affect the validity of this Agreement or the Department's right to enforce this Agreement.

39. Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards

This Agreement is subject to the administrative requirements, cost principles, and audit requirements for federal awards to non-federal entities, which are set forth at 2 Code of Federal Regulations part 200.

EXHIBIT D

40. Single Audit Requirements

Grantee is responsible for complying, as necessary, with the Single Audit Act and its implementing regulation at 2 Code of Federal Regulations part 200, subpart F regarding audit requirements.

41. Disputes

In the event of any conflict between this Agreement and any Grantee documents or side agreements, this Agreement and the Program Requirements shall prevail, are applicable, and shall be enforceable by the Department even if the Department provided review or approval of such documents and side agreements.

42. Consent

The parties agree that wherever the consent or approval of the Department or Grantee is required under this Agreement, such consent or approval shall not be unreasonably withheld, conditioned, or delayed, unless the same is specified as being in that party's sole and absolute discretion, or other words of similar import.

43. Grantee Liability

Grantee shall remain liable to the Department for performance under this Standard Agreement and compliance with all Program Requirements regardless of any Department-approved transfer or assignment of interest, or of any designation of a third party for the undertaking of all or any part of the Scope of Work. Likewise, each Co-Grantee shall remain jointly and severally liable to the Department for performance under this Standard Agreement and compliance with all Program Requirements regardless of any Department-approved transfer or assignment of interest; any designation of a third party for the undertaking of all or any part of the Scope of Work; or the Co-Grantees' identification of a Designated Payee.

44. Defense and Indemnification

Grantee agrees to defend, indemnify, and hold harmless the Department, and its appointees, agents, employees, and officers, from any losses, damages, liabilities, claims, actions, judgments, court costs and legal or other expenses (including attorneys' fees), which may arise in connection with Grantee's use of the Grant funds and performance under this Agreement. If any attorney, including the

EXHIBIT D

California Attorney General, is engaged by the Department to enforce, construe, or defend any provision of this paragraph, with or without the filing of any legal action or proceeding, Grantee shall, individually or jointly, pay to the Department, immediately upon demand, the amount of all attorneys' fees and costs incurred by the Department in connection therewith.

45. Time Is of the Essence

Time is of the essence under this Agreement, and in the performance of every term, covenant, and obligation contained herein.

EXHIBIT E

PROJECT-SPECIFIC PROVISIONS AND SPECIAL TERMS AND CONDITIONS
Permanent Housing

A. PROJECT-SPECIFIC PROVISIONS

Project Name: Cedar Community Apartments **Street Address: 39802 Cedar Boulevard, Newark, CA 94560** **County of Alameda**				**Assessor Parcel Number (APN):** **901-0195-037, 901-0195-038**	
# of Bedrooms	Units	Non-Homekey Units	Homekey-Assisted Units	AMI Income Limit	Restriction to Subset of Target Population
Manager Unit	1	0	1	N/A	
0 (Studio)	23	0	23	30%	Chronically Homeless
0 (Studio)	34	0	34	30%	N/A
1-Bedroom	27	0	27	30%	Chronically Homeless
1-Bedroom	11	0	11	30%	N/A
2-Bedroom	10	0	10	30%	Chronically Homeless
2-Bedroom	19	0	19	30%	N/A
Totals:	125	0	125		

1. **Permanent Housing – Award, Disbursement, and Eligible Use(s).** Grantee received Homekey Program award letter on July 25, 2022 (the "**Award Date**"). Pursuant to that award letter, the Grantee is receiving Homekey Grant funds in the amount of $36,916,293.00 (the "**Award**"). The Designated Payee of these funds is Allied 39802 Cedar LLC. Grantee will use the funds to provide Permanent Housing for the Target Population. Specifically, the Grantee will apply these funds towards the following eligible use(s):

EXHIBIT E

a. Acquisition and rehabilitation of a hotel to provide Permanent Housing for the Target Population.

b. Capitalization of an operating subsidy for the Assisted Units.

Grantee's Award includes $33,145,673.00 for capital expenditures and $3,770,620.00 for operating funds. The Expenditure Deadline for Capital Funds is set forth herein as a Milestone Completion Date. The Expenditure Deadline for Operating Funds is set forth herein as a Milestone Completion Date.

Grantee will receive additional funds in the amount of $1,240,000.00 (the "**Bonus Award**") if the Project's Assisted Units achieve full occupancy (with consideration for an average of 10 percent vacancy) within eight (8) months of the Award Date. The occupancy deadline in connection with Grantee's Bonus Award is set forth herein as a Milestone Completion Date. The Department will not disburse the Bonus Award until it receives documentary evidence, in form and substance reasonably satisfactory to the Department, that the Milestone Completion Date has been met. Grantee shall only use such Bonus Award for its incurred or prospective operating costs for the Project. If Grantee duly satisfies all requirements and conditions relative to the Bonus Award, Grantee's total award amount will be $38,156,293.00 (the "**Total Award Amount**").

2. **Project Narrative.** Grantee is acquiring a hotel located at 39802 Cedar Boulevard, Newark, CA that will include 124 units of permanent housing for the target populations of persons experiencing chronic homelessness or at-risk of homelessness. Sixty (60) units will be occupied by the chronically homeless population, and sixty-four (64) units will be occupied by persons at-risk of homelessness. The project is within a half-mile of a public transit station, grocery store, health facility, and pharmacy. Supportive services will be provided by Abode Services, Alameda County Health Care Services Agency, and the Veterans Affairs Health Care System.

   The hotel was constructed in 2000 and underwent interior rehabilitation in 2015; due to the relatively recent construction and rehabilitation, and overall good condition of the property, there will be minimal rehabilitation to the units. Rehabilitation will focus on converting the operations of the building from a hotel to a permanent supportive housing site, including converting the lobby, breakfast nook, exercise room, and office area into property management and supportive services offices, a community room, and mail boxes, among other uses. Exterior rehabilitation will focus on converting unneeded parking spaces and the pool area into community space for a

EXHIBIT E

children's play area, dog park, and a sport court. Site security and safety will be enhanced by the installation of a perimeter fence, vehicle and pedestrian access gate, key system, and security cameras.

Obligation to Serve Subsets of the Target Population. Grantee shall ensure that at least 48 percent of the Project's Assisted Units are restricted to occupancy by the Chronically Homeless.

3. **Scope of Work.** Grantee will complete building interior upgrades including converting the lobby, breakfast nook, exercise room, and office area from their hotel focused use to a property management and resident services use. The conversion will also create a community room and mail boxes. Exterior upgrades will include adding perimeter fencing, vehicle and pedestrian access gates, a key card access system, and a security camera system in each building and around the property. Community amenity upgrades will include converting unneeded parking spaces and the pool area into community open space including a children's play area, dog run, hard-scaped open space area, and a sport court.

   On-site supportive services will be provided by Abode Services, Alameda County Health Care Services Agency, and the Veterans Affairs Health Care System. Supportive services will include, but are not limited to:

   a. Case management – Case management staff will assist tenants in developing goals and working collaboratively with tenants on setting attainable goals that will inform the service plan. Case management services will support the tenant on achieving self-sufficiency. Tenants will also be connected to other community service providers as necessary.

   b. Behavioral health services – Services staff will refer tenants to behavioral health support as needed. Staff will also facilitate monthly groups focused on mental health and wellness for tenants. The groups will include, but are not limited to, art therapy, women/men process groups, trauma recovery groups, and other groups to be determined with input from tenants. Tenants will also provide input on other community activities that would benefit the overall wellness of the community.

   c. Physical health services – Tenants will receive support in scheduling appointments, traveling to appointments, and maintaining health care benefits. Services staff will collaborate with medical providers as needed.

EXHIBIT E

d. Assistance obtaining benefits and essential documentation – Tenants will receive support in accessing benefits including Supplemental Nutrition Assistance Program (SNAP), CalFresh, veteran's benefits/assistance, in-home support services, or any other assistance program. Services staff will collaborate closely with local agencies to provide comprehensive access to benefits and services for residents. Weekly information sessions will also be hosted to provide awareness of available benefits and services during the first year of occupancy and quarterly thereafter.

e. Education and employment services – Monthly workshops will be provided to support tenants or household members who are pursuing higher education, and services staff will help research scholarship opportunities, provide application support, and coordinate with local colleges and universities to provide tours and on-site information sessions. Tenants will also have access to employment placement and training, including assistance in preparing a resume, developing interpersonal skills, and interviewing.

f. Other services, such as housing retention skills, legal assistance, family connection services, etc. – Goal of services will be to promote self-sufficiency through weekly life skills workshops that focus on promoting health and wellness, including healthy cooking, financial management and budgeting, and housekeeping. Residents will be engaged early by service staff to identify goals and created individualized service plans to identify goals in areas including family reunification, domestic violence support, legal assistance and/or family law services, and any other identified service goals residents may have.

g. Food pantry and resources – Abode services will work will local food banks to procure items for the site and have a weekly food distribution. Additionally, an inventory will be created with donations of perishable and non-perishable items in the event of a food emergency.

Case manager ratio is 20:1 for persons experiencing chronic homelessness and 40:1 for persons at-risk of homelessness. Supportive services staffing will include:

a. Clinical Case Manager (2 FTE, on-site)

b. Resident Service Coordinator (1 FTE, on-site)

c. Wellness Specialist (1 FTE, on-site)

EXHIBIT E

d. Program Coordinator (1 FTE, on-site)

Supportive services outcomes include:

a. Ninety percent of tenants will remain housed during their first year of tenancy.

b. Seventy percent of tenants will increase their income above $850 per month or maintain their current income above that level.

c. Ninety percent of tenants will be connected to medical services and reduce unnecessary use of emergency and acute services.

4. Grantee Contract Coordinator.

Authorized Representative Name:	Steven Turner
Authorized Representative Title:	Community Development Director
Entity Name:	City of Newark
Address:	37101 Newark Boulevard, Newark, CA 94560
Telephone No.:	(510) 578-4330
E-Mail Address:	stevent@newark.org

Authorized Representative Name:	Jonathan White
Authorized Representative Title:	Chief Real Estate Officer
Entity Name:	Allied Housing, Inc.
Address:	40849 Fremont Boulevard, Fremont, CA 94538
Telephone No.:	(408) 951-1851
E-Mail Address:	jwhite@abodeservices.org

Authorized Representative Name:	Jonathan White

EXHIBIT E

Authorized Representative Title:	Chief Real Estate Officer
Entity Name:	Allied 39802 Cedar LLC
Address:	40849 Fremont Boulevard, Fremont, CA 94538
Telephone No.:	(408) 951-1851
E-Mail Address:	jwhite@abodeservices.org

5. **Additional Conditions Precedent to Disbursement.**

   a. Grantee will submit National Environmental Policy Act (NEPA) approval documentation for HOME Investment Partnership Program funds and United States Department of Housing and Urban Development Housing Choice Vouchers.

   b. Allied Housing, Inc. must submit a legally sufficient resolution, as determined by the Department in its sole and reasonable discretion, from its Board of Director's ratifying the resolution number 470 of its Executive Committee in its capacity as sole member manager of Allied 39802 Cedar LLC dated August 9, 2022.

6. **Budget Detail.**

   Grantee is obligated to cover the Project's development, operations, and service costs for five (5) years. Grantee will satisfy this obligation by leveraging funding commitments, or other reasonable funding assurances, from the following funding sources:

   a. Homekey award dated July 25, 2022, for a funding commitment of $38,156,293.00 for capital expenses and program operations.

   b. HOME Consortium American Rescue Plan Act (ARPA) allocation from the Alameda County Community Development Agency, in a letter dated January 18, 2022, for a funding commitment of $4,000,000.00 for capital expenditures.

   c. American Rescue Plan Act (ARPA) and Affordable Housing Fund allocations from the City of Newark, in a resolution adopted January 13, 2022, for a funding commitment of $6,000,000.00 for capital expenditures.

EXHIBIT E

d. Bay's Future Fund (BFF) allocation from the Corporation for Supportive Housing (CSH), dated May 19, 2022, for a funding commitment of $655,000.00 in the form of a 4 percent interest loan with a 1.5 percent origination fee. The BFF allocation is a reservation of funds and still subject to CSH's credit committee approval; for this reason, Allied Housing, Inc. has committed $625,000.00 in the form of a 3 year fully amortized loan at 3 percent simple interest, dated May 19, 2022, in the event the BFF allocation is not secured.

Grantee shall maintain the ongoing affordability of the Project by leveraging the following non-Homekey sources of rental or operating subsidies:

a. Supplemental Capitalized Operating Subsidy Reserve commitment from Allied Housing, Inc., in a letter dated January 28, 2022, for $2,177,889.00.

b. U.S. Department of Housing and Urban Development Veterans Affairs Supportive Housing (HUD-VASH) and non-HUD-VASH Project-Based Vouchers allocation from the Housing Authority of the County of Alameda, dated January 14, 2022, for a commitment of twelve (12) HUD-VASH Project-Based Vouchers and forty-eight (48) non-HUD-VASH Project-Based Vouchers over 20 years, together valued at $4,154,044 over 4 years.

7. Performance Milestones.

Performance Milestones	Milestone Completion Date
The Project's escrow must be closed, and the capital funds must be fully expended.	March 25, 2023
All Homekey-funded construction or rehabilitation must be completed.	July 25, 2023
Full occupancy by the Target Population must be accomplished in accordance with the descriptions and representations set forth in the Application.	March 25, 2023

EXHIBIT E

Performance Milestones	Milestone Completion Date
A copy of Grantee's written nondiscrimination policy (in accordance with Exhibit D of this Agreement) must be submitted to the Department.	March 25, 2023
A [DRAFT] Regulatory Agreement or other use restriction must be submitted to the Department for review and approval.	March 25, 2023
A Department-approved Regulatory Agreement or other use restriction must be recorded against the Project real property as specified and described in the NOFA and this Agreement.	July 25, 2023
Homekey-funded operating funds must be fully expended.	June 30, 2026
A Homekey Program and Expenditure Report must be submitted to the Department as specified and described in the NOFA.	January 31 – Each year for five (5) years following the Effective Date of this Agreement

B. SPECIAL TERMS AND CONDITIONS

The following Special Terms and Conditions are applicable to this Project and shall control notwithstanding anything to the contrary herein:

1. **Use Restriction.** The state, regional, local, or tribal Grantee shall ensure that the Project is duly encumbered with a 55-year covenant, declaration, regulatory agreement, or similar use restriction (the "**Regulatory Agreement**") that **(a)** is recorded in first position against the Project for the benefit of the state, regional, local, or tribal Grantee; **(b)** restricts the use, operation, occupancy, and affordability of the Project in accordance with this Agreement and the applicable Program

EXHIBIT E

Requirements; **(c)** duly names the Department as a third-party beneficiary with the right and privilege, but not the obligation, of enforcement thereof; and **(d)** is otherwise in form and substance acceptable to the Department.

The Regulatory Agreement must be recorded against the real property of the Project site by the Milestone Completion Date set forth herein. The Grantee shall obtain the Department's express written approval of the Regulatory Agreement prior to the recordation of the same. After recordation, the Grantee shall promptly provide the Department with a conformed copy of the recorded Regulatory Agreement.

Unless otherwise authorized by the prior and express written approval of the Department, the Regulatory Agreement must be recorded as a lien against the Project in first position, and must remain in first position, over all other Project agreements, covenants, or other matters of record on the real property for the period of affordability required by the Program.

2. Grantee has committed to a 55-year use restriction for the Project and has waived any potential accommodation by the Department to increase income limits, as described in the NOFA, for 100 percent of the Assisted Units.

3. Grantee shall submit a complete supportive services plan, including a property management plan, for the Project and such plan must be approved by the Department in its sole and reasonable discretion, prior to occupancy.

RESOLUTION NO.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWARK APPROVING LOAN AGREEMENT AND ASSOCIATED AGREEMENTS BY AND BETWEEN THE CITY AND ALLIED 39802 CEDAR LLC, FOR THE CEDAR COMMUNITY APARTMENTS HOMEKEY PROJECT

WHEREAS, the City of Newark ("City") and Allied Housing, Inc. ("Allied") have jointly applied for and have received approval of a Homekey grant from the California Department of Housing and Community Development ("HCD") in the amount of Thirty-Eight Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($38,156,293.00) (the "Homekey Grant") to finance the acquisition and conversion of an existing hotel property located at 39802 Cedar Boulevard, Newark, California (the "Property") into an affordable supportive housing project for chronically homeless persons and persons at risk of homelessness (the "Project"); and

WHEREAS, the City Council has authorized the City to enter a Standard Agreement by and among HCD, City, Allied and Allied 39802 Cedar, LLC ("Developer"), Agreement Number 22 HK-17486, which sets forth the requirements imposed in connection with the Homekey Grant (the "Project Homekey Agreement"); and

WHEREAS, the City desires for Developer to acquire the Property and convert it into a one hundred twenty-five (125) unit multifamily residential apartment complex consisting of fifty-seven (57) studio units, thirty-eight (38) one-bedroom units, and thirty (30) two-bedroom units, and for all of the units (except for one on-site manager's unit) to be rented at an affordable housing cost to extremely-low income households; and

WHEREAS, Developer has requested the City to provide a loan to Developer to assist in the acquisition and development of the Project through City's loan of the amount of the Homekey Grant, plus an additional Six Million Dollars ($6,000,000) in funds from the City's Housing Impact Fee Fund and American Rescue Plan Act (ARPA) Recovery Fund (the "City Funds"), for a total of Forty-Four Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($44,156,293.00); and

WHEREAS, City, Allied and Developer have negotiated and prepared a "Loan Agreement" which would provide for the City's loan of the City Funds and the Homekey Grant funds to the Developer; and

WHEREAS, pursuant to the Loan Agreement the Developer would execute a Secured Promissory Note ("Promissory Note") promising to repay the City Loan, and a Deed of Trust, Assignment of Rents, Security Agreement and Fixture Filing ("Deed of Trust") securing the Promissory Note; and

WHEREAS, pursuant to the Loan Agreement the City and Developer would execute an Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants ("Regulatory Agreement") that would require all of the units (except for one on-site manager's unit) to be rented at an affordable housing cost to extremely-low income households; and

WHEREAS, pursuant to the Loan Agreement the City, Developer and the County of Alameda ("County") would execute a Subordination Agreement that would establish the order of lien priority between the Regulatory Agreements and Deeds of Trust of the City and County, and provide each party the right to cure defaults of the other party's agreements; and

WHEREAS, the Regulatory Agreement requires a tenant selection priority to be provided to persons who live or work in the City, to the extent such priority is permitted by applicable fair housing laws and Project funding sources; and

WHEREAS, the City is committed to enacting policies and programs that affirmatively further fair housing ("AFFH"), and the City's strong commitment to AFFH is reflected in the City's affordable housing workplan, adopted by the City Council in 2021; and

WHEREAS, the Project would provide affordable housing opportunities close to excellent schools and local services, in an area identified as high opportunity by the California Tax Credit Allocation Committee in accordance with the HCD AFFH Data Resources and Mapping Tool, and the area has a higher median income than other areas in the City and has an ethnically diverse population; and

WHEREAS, the Project's unit mix and affordability levels, coupled with the City live/work tenant selection priority, would affirmatively further fair housing by enhancing the area's socioeconomic diversity and providing a high quality housing project in an area of the highest opportunity, resulting in less segregation along socioeconomic lines in the City and in the surrounding tri-city area; and

WHEREAS, housing projects that are funded by Round 2 of Project Homekey are exempt from the requirements of the California Environmental Quality Act ("CEQA") pursuant to Health and Safety Code Section 50675.1.4, provided that certain statutory prerequisites are satisfied; and

WHEREAS, the City has determined that the statutory prerequisites to the CEQA exemption set forth in Health and Safety Code Section 50675.1.4 have been satisfied with respect to the Project; and

WHEREAS, the Project consists of the minor alteration of existing private structures involving negligible or no expansion of existing or former use, and is therefore also exempt from the requirements of CEQA pursuant to Section 15301 of the CEQA Guidelines;

WHEREAS, the County Housing and Community Development Department has made a Finding of No Significant Impact that determines that the Project will have no significant impact on the human environment, and that an Environmental Impact Statement under the National Environmental Policy Act of 1969 (NEPA) is not required.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Newark as follows:

1. The City Council finds that the foregoing Recitals are true and correct and are incorporated into this Resolution.

2. The City Council hereby approves the Loan Agreement, Promissory Note, Deed of Trust, Regulatory Agreement and Subordination Agreement, substantially in the form presented to the City Council, with such non-material changes as may be approved by the City Community Development Director and the City Attorney.

3. The City Council authorizes the City Manager (or his designee), on behalf of the City, to execute the Loan Agreement, Regulatory Agreement and Subordination Agreement, and to take such other actions as are necessary to carry out the City's obligations under the Loan Agreement, Regulatory Agreement and Subordination Agreement, including the execution of escrow instructions and closing documents.

4. The City Council finds that the Project is exempt from CEQA pursuant to Health and Safety Code Section 50675.1.4 and Section 15301 of the CEQA Guidelines. City staff is authorized and directed to file a Notice of Exemption from CEQA with the California Office of Planning and Research and the County Clerk of the County of Alameda in the manner specified in Subdivisions (b) and (c) of Section 21152 of the Public Resources Code. Passed and adopted by the City Council of the City of Newark at a meeting duly held on the 22nd day of September, 2022, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

5192081.1

Attachment B
Exhibit 1

LOAN AGREEMENT

by and between

THE CITY OF NEWARK,

and

ALLIED 39802 CEDAR, LLC

(Cedar Community Apartments)

LOAN AGREEMENT
(Cedar Community Apartments)

THIS LOAN AGREEMENT (this "**Agreement**") is entered into effective as of _____, 2022 ("**Effective Date**") by and between the City of Newark, a California municipal corporation ("**City**"), and Allied 39802 Cedar, LLC, a California limited liability company ("**Developer**"). City and Developer are hereinafter collectively referred to as the "**Parties**."

RECITALS

A. Developer and City have jointly applied for and have received approval of a Homekey grant from the State of California in the amount of Thirty-Eight Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($38,156,293.00) (the "**Homekey Grant**") to finance the acquisition and conversion of an existing hotel property located at 39802 Cedar Boulevard, Newark, California (the "**Property**") into an affordable supportive housing project for chronically homeless persons and persons at risk of homelessness. Developer and City have entered into a Standard Agreement with the California Department of Housing and Community Development, dated as of _____, 2022, which sets forth the requirements imposed in connection with the Homekey Grant (the "**Project Homekey Agreement**"). The Property is more particularly described on Exhibit A attached hereto and incorporated herein by this reference.

B. Developer has entered into an agreement to purchase the Property. The Parties desire for Developer to acquire the Property and convert it into a one hundred twenty-five (125) unit multifamily residential apartment complex consisting of fifty-seven (57) studio units, thirty-eight (38) one-bedroom units, and thirty (30) two-bedroom units. All of the units will be rented at an affordable housing cost to extremely-low income households, except for one two-bedroom unit which will be used as an on-site manager's unit (the "**Project**").

C. Developer has requested, and City has agreed, to provide a loan to Developer to assist in the acquisition and development of the Project in the amount of the Homekey Grant, plus an additional Six Million Dollars ($6,000,000) in funds from the City's Housing Impact Fee Fund and American Rescue Plan Act (ARPA) Recovery Fund (the "**City Funds**"), for a total of Forty-Four Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($44,156,293.00).

D. The City has determined that (i) the acquisition, conversion and rehabilitation of the Property pursuant to this Agreement will be of benefit to the City by providing affordable housing in the City, and (ii) the loan is necessary to make the Project economically feasible and affordable to extremely-low income households, and to provide the tenant services required in connection with the operation of the Project.

E. A material inducement to City to enter into this Agreement is the agreement by Developer to convert and rehabilitate the Property within the time periods specified herein and in accordance with the provisions hereof, and the City would be unwilling to enter into this

Agreement in the absence of an enforceable commitment by Developer to complete the Project in accordance with such provisions and within such time periods.

F. Prior to the disbursement of the Loan by the City: (i) Developer shall execute a secured promissory note in the amount of the Loan and a Deed of Trust, Assignment of Rents, Security Agreement and Fixture Filing, which will provide City with a security interest in the Property and the Project, and (ii) Developer and Cityshall execute an Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants, which will be recorded against the Property and which will require Project rents to be affordable to extremely-low income households for a term of not less than fifty-five (55) years, and will set forth other requirements relating to the operation of the Project.

NOW, THEREFORE, in consideration of the mutual covenants contained herein and good and valuable consideration the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows.

ARTICLE I
DEFINITIONS

1. Definitions. The following terms shall have the meanings set forth in the Sections referenced below whenever used in this Agreement and the Exhibits attached hereto. Additional terms are defined in the Recitals and text of this Agreement.

1.1 **"Agreement"** means this Loan Agreement.

1.2 "**Bankruptcy Law**" is defined in Section 10.1(h).

1.3 "**Certificate of Completion**" is defined in Section 3.14.

1.4 **"City"** means the City of Newark, a California municipal corporation.

1.5 **"City Documents"** means the Agreement, Note, Deed of Trust and Regulatory Agreement.

1.6 "**City Funds**" means the Six Million Dollars ($6,000,000) portion of the Loan funded by the City's Housing Impact Fee Fund and American Rescue Plan Act (ARPA) Recovery Fund.

1.7 "**City Prorata Percentage**" means sixty percent (60%) of Seventy-Five Percent (75%) of the Residual Receipts.

1.8 "**Claims**" is defined in Section 3.16.

1.9 "**Conditions of Approval**" is defined in Section 3.2.

1.10 "**Construction Plans**" is defined in Section 3.10.

1.11 "**Controlled Affiliate**" is defined in Section 7.2.

1.12 "**County**" means the County of Alameda.

1.13 **"Deed of Trust"** is defined in Section 4.1

1.14 **"Developer"** means Allied 39802 Cedar, LLC, a California limited liability company, or its successors or assigns.

1.15 "**Effective Date**" means the date in the first paragraph hereof.

1.16 "**Environmental Laws**" is defined in Section 9.4.

1.17 "**Event of City Default**" is defined in Section 10.2.

1.18 "**Event of Developer Default**" is defined in Section 10.1.

1.19 "**Financing Plan**" is defined in Section 3.9.

1.20 "**Hazardous Materials**" is defined in Section 9.3.

1.21 "**Homekey Grant**" is defined in Recital A.

1.22 "**Improvements"** is defined in Section 3.9.

1.23 **"Indemnitees**" is defined in Section 3.16.

1.24 **"Loan"** and **"Loan Proceeds"** are defined in Section 4.1.

1.25 **"Note"** is defined in Section 4.1.

1.26 "**Official Records**" means the official records of the County.

1.27 **"Operating Expenses"** means all direct costs and expenses necessary to operate the Project including: (1) debt service on any loans secured by the Property as described in the Financing Plan or otherwise approved by City, provided that such loans have been used to develop or improve the Project (or to refinance loans used for development or improvement of the Development); (2) resident service program and property management fees and costs; (3) property taxes and assessments (if any); (4) insurance premiums; (5) maintenance and repair; (6) reasonable payments to reserves for operating contingencies, replacement of capital items, and other reserve uses in such amounts as are required by the loans described in paragraph (1); (7) an asset management fee payable to the sole member of Developer in the amount of $25,000 per year; and (8) developer fee to the Developer or its affiliate for development services for the Project in such amount as set forth in the Financing Plan.

1.28 **"Operating Revenues"** means all income derived from the Project, and

includes, without limitation: (i) rents; (ii) rent subsidy payments received on behalf of tenants; and (iii) receipts from laundry, parking, vending, or other services in which a fee is charged. Operating Revenues does not include Project operating deficit reserve funds which are drawn down and used to pay for Operating Expenses of the Project.

1.29 **"Parties"** means City and Developer.

1.30 "**Prevailing Wage Laws**" is defined in Section 3.16.

1.31 "**Project"** is defined in Recital B and further described in Section 3.2.

1.32 "**Project Homekey Agreement**" is defined in Recital A.

1.33 **"Property"** is defined in Recital A.

1.34 "**Regulatory Agreement"** is defined in Recital F.

1.35 "**Refinancing**" and "**Refinancing Plan**" are defined in Section 5.1.

1.36 **"Residual Receipts"** means the excess of annual Operating Revenues over annual Operating Expenses for the Project.

1.37 **"Schedule of Performance"** means the means the summary schedule of actions to be taken by the Parties pursuant to this Agreement to achieve the rehabilitation of the Improvements, attached to this Agreement as Exhibit C.

1.38 **"Scope of Development"** means the description of development to be performed on the Property by the Developer, attached to this Agreement as Exhibit B.

1.39 "**Transfer**" is defined in Section 7.1

ARTICLE II
REPRESENTATIONS; EFFECTIVE DATE AND TERM

2.1 Developer's Representations. Developer represents and warrants as follows, and Developer covenants that until the expiration or earlier termination of this Agreement, upon learning of any fact or condition which would cause any of the warranties and representations in this Section 2.1 not to be true, Developer shall immediately give written notice of such fact or condition to City. Developer acknowledges that City shall rely upon Developer's representations made herein notwithstanding any investigation made by or on behalf of City.

(i) Authority. Developer is a limited liability company duly organized and in good standing under the laws of the State of California. Developer has the full right, power and authority to undertake all obligations of Developer as provided herein, and Developer's

execution, performance and delivery of this Agreement and the City Documents have and shall been duly authorized by all requisite actions.

(ii) No Conflict. Developer's execution, delivery and performance of its obligations under this Agreement will not constitute a default or a breach under any contract, agreement or order to which Developer is a party or by which it is bound.

(iii) No Litigation or Other Proceeding. No litigation or other proceeding (whether administrative or otherwise) is outstanding or has been threatened which would prevent, hinder or delay the ability of Developer to perform its obligations under this Agreement.

(iv) No Developer Bankruptcy. Developer is not the subject of a bankruptcy or insolvency proceeding.

2.2 City Representations. City represents and warrants to Developer and covenants that until the expiration or earlier termination of this Agreement, upon learning of any fact or condition which would cause any of the warranties and representations in this Section 2.2 not to be true, City shall immediately give written notice of such fact or condition to Developer. City acknowledges that Developer shall rely upon City's representations made herein notwithstanding any investigation made by or on behalf of Developer.

(i) Authority. City is a municipal corporation duly organized and in good standing under the laws of the State of California. City has the full right, power and authority to undertake all of the respective obligations as provided herein, and the execution, performance and delivery of this Agreement by City has been duly authorized by all requisite actions on the part of the City. The persons executing this Agreement on behalf of City has been duly authorized to do so. This Agreement constitutes a valid and binding obligation of City.

(ii) No Conflict. City's execution, delivery and performance of their respective obligations under this Agreement will not constitute a default or a breach under any contract, agreement or order to which City is a party or by which either is bound.

(iii) No Litigation or Other Proceeding. No litigation or other proceeding (whether administrative or otherwise) is outstanding or has been threatened which would prevent, hinder or delay the ability of City to perform their obligations under this Agreement.

(iv) No Bankruptcy. City is not the subject of a bankruptcy or insolvency proceeding.

2.3 Effective Date. The obligations of Developer and City hereunder shall be effective as of the Effective Date.

ARTICLE III
DEVELOPMENT OF THE PROJECT

3.1 The Property. Developer shall acquire fee simple title to the Property upon or

prior to the Effective Date.

3.2 Scope of Development. Developer shall develop the Project on the Property substantially in accordance with the terms and conditions of this Agreement, the Scope of Development attached hereto as Exhibit B, the Project Homekey Agreement, and in compliance with the terms and conditions of all approvals, entitlements and permits that the City or any other governmental body or agency with jurisdiction over the Project or the Property has granted or issued as of the date hereof or may hereafter grant or issue in connection with development of the Project, including without limitation, all mitigation measures imposed in connection with environmental review of the Property and the Project and all conditions of approval imposed in connection with any entitlements, approvals or permits (all of the foregoing approvals, entitlements, permits, mitigation measures and conditions of approvalare hereafter collectively referred to as the "**Conditions of Approval**").

3.3 Project Approvals. Developer acknowledges and agrees that execution of this Agreement by City does not constitute approval for the purpose of the issuance of building permits for the rehabilitation of the Project, does not limit in any manner the discretion of City in such approval process, and does not relieve Developer from the obligation to obtain all necessary entitlements, approvals, and permits for the rehabilitation of the Project, including without limitation, the approval of architectural plans, and the completion of any required environmental review of the Project pursuant to CEQA and the National Environmental Policy Act (NEPA).

Developer covenants that it shall: (i) obtain all necessary permits and approvals which may be required by City and any other governmental agency having jurisdiction over the rehabilitation of the Project or the development of the Property, (ii) comply with all Conditions ofApproval, (iii) comply with all mitigation measures, if any, imposed in connection with any environmental review of the Property or the Project, and (iv) not commence rehabilitation of the Project prior to issuance of building permits.

3.4 Fees. Developer shall be solely responsible for, and shall promptly pay when due, all customary and usual fees and charges of City in connection with obtaining building permits and other approvals for the Project, including without limitation, those related to the processing and consideration of amendments, if any, to the current entitlements, any related approvals and permits, environmental review, architectural review, historic review, and any subsequent approvals for the Project or the development of the Property.

3.5 Development Schedule. Developer shall commence and complete rehabilitation of the Project and shall satisfy all other obligations of Developer under this Agreement within the time periods set forth herein and in the Schedule of Performance attached hereto as Exhibit C, as such time periods may be extended upon the mutual written consent of the Parties. Developer's failure to commence or complete rehabilitation of the Project in accordance with the foregoing schedule as such may be amended by the written consent of the Parties shall constitute a default hereunder. The Developer shall provide quarterly progress reports to the City regarding the status of the rehabilitation of the Project. The Developer shall provide the reports and information required under this Section until the Project is fully leased up.

3.6 Cost of Acquisition and Rehabilitation. Except as expressly set forth herein,

Developer shall be solely responsible for all direct and indirect costs and expenses incurred in connection with the acquisition of the Property, the design, development and rehabilitation of theProject and compliance with the Conditions of Approval, including without limitation the installation and rehabilitation of all off-site or on-site improvements required by City in connection therewith, and none of such costs and expenses shall be the obligation of the City.

3.7 Rights of Access; Books and Records. For the purpose of ensuring that the Project is developed in compliance with this Agreement, Developer shall permit representatives of the City to enter upon the Property to inspect the Project following 48 hours' written notice (except in the case of emergency in which case such notice as may be practical under the circumstances shall be provided). Upon request, Developer shall permit the City to inspect at reasonable times and on a confidential basis those books, records and all other documents of Developer necessary to determine Developer's compliance with the terms of this Agreement.

3.8 City Disclaimer. Developer acknowledges that the City is under no obligation, and neither City undertakes or assumes any responsibility or duty to Developer or to any third party, to in any manner review, supervise, or inspect the progress of rehabilitation or the operationof the Project. Developer and all third parties shall rely entirely upon its or their own supervisionand inspection in determining the quality and suitability of the materials and work, the performance of architects, subcontractors, and material suppliers, and all other matters relating tothe rehabilitation and operation of the Project. Any review or inspection undertaken by the City issolely for the purpose of determining whether Developer is properly discharging its obligations under this Agreement, and shall not be relied upon by Developer or any third party as a warranty or representation by the City as to the quality of the design or rehabilitation of the Project and other improvements constructed on the Property (collectively, the **"Improvements**") or otherwise.

3.9 Financing Plan. As set forth in the attached Exhibit D, Developer has provided City with a financing plan for the Project **("Financing Plan")** which describes (i) the estimated costs of Project development, including acquisition costs, and hard and soft construction costs, (ii) an operating pro forma which describes projected revenue and expenses for the Project, and (iii) identification of sources of construction and permanent financing.

3.10 Construction Plans. Developer shall submit to City detailed construction plans for the Project (the "**Construction Plans**") for approval. As used herein "**Construction Plans**" mean all construction documents upon which Developer and Developer's contractors shall rely in the rehabilitation of the Project and development of the Property and shall include, without limitation, final architectural drawings and materials specifications. The Construction Plans shall be based upon the Scope of Development and upon the development approvals issued by the City for the Project, and shall not materially deviate therefrom without the express written consent of City. Such approval of the Construction Plans by the City shall not relieve Developer's obligation to obtain any and all approvals and permits required by the City or the City Building Division.

If rejected by the City in whole or in part, Developer shall submit new or corrected Construction Plans within thirty (30) days after notification of the City's rejection and the reasons therefor. The City shall then have thirty (30) days to review and approve Developer's

new or corrected Construction Plans. The provisions of this Section relating to time periods for approval, rejection, or resubmission of new or corrected Construction Plans shall continue to apply until the Construction Plans have been approved by the City.

3.11 Rehabilitation Pursuant to Plans. Developer shall rehabilitate the Project in accordance with the approved Construction Plans, the Conditions of Approval, and all other permits and approvals granted by the City pertaining to development of the Project. Developer shall comply with all directions, rules and regulations of any fire marshal, health officer, building inspector or other officer of every governmental agency having jurisdiction over the Property or the Project. Each element of the work shall proceed only after procurement of each permit, license or other authorization that may be required for such element by any governmental agency having jurisdiction. All design and rehabilitation work on the Project shall be performed by licensed contractors, engineers or architects, as applicable.

3.12 Change in Construction Plans. If Developer desires to make any material change in the approved Construction Plans, Developer shall submit the proposed change in writing to the City for its written approval, which approval shall not be unreasonably withheld or delayed if the Construction Plans, as modified by any proposed change, conform to the requirements of this Agreement and any approvals issued by City after the Effective Date. The Parties shall meet in good faith to discuss the changes if the City propose to reject the changes. Any change in the Construction Plans required in order to comply with applicable codes shall be deemed approved, so long as such change does not substantially nor materially change the design, function, use, or amenities of the Project as shown on the latest approved Construction Plans. For purposes of this section, a "material change" means a change order that would result in a change of costs of Fifty Thousand Dollars ($50,000) or more.

3.13 Defects in Plans. City shall not be responsible to Developer or to any third party for any defect in the Construction Plans or for any structural or other defect in any work done pursuant to the Construction Plans. Developer shall indemnify, defend (with counsel approved by City) and hold harmless the Indemnitees (defined in Section 3.17 below) from and against all Claims arising out of, or relating to, or alleged to arise from or relate to defects in the Construction Plans or defects in any work done pursuant to the Construction Plans whether or not any insurance policies shall have been determined to be applicable to any such Claims. Developer's indemnification obligations set forth in this Section shall survive the expiration or earlier termination of this Agreement and the recordation of a Certificate of Completion. It is further agreed that City does not, and shall not, waive any rights against Developer which it may have by reason of this indemnity and hold harmless agreement because of the acceptance by City, or Developer's deposit with City of any of the insurance policies described in this Agreement. Developer's indemnification obligations pursuant to this Section shall not extend to Claims arising due to the gross negligence or willful misconduct of the Indemnitees.

3.14 Certificate of Completion for Project. Promptly after completion of rehabilitation of the Project, issuance of a final Certificate of Occupancy (or other applicable final City Building Department approval) by the City, and the written request of Developer, the City will provide an instrument ("**Certificate of Completion"**) so certifying. The Certificate of Completion shall be conclusive evidence that Developer has

satisfied itsobligations regarding the rehabilitation and development of the Property.

The Certificate of Completion shall be issued substantially in the form attached hereto as Exhibit E, and at Developer's option, shall be recorded in the Official Records. The Certificate of Completion shall not constitute evidence of compliance with or satisfaction of any obligation of Developer to any holder of a deed of trust or mortgage securing money loaned to finance the Project or any part thereof and shall not be deemed a notice of completion under the California Civil Code, nor shall such Certificate provide evidence that Developer has satisfied any obligation that survives the expiration of this Agreement, including without limitation, Developer's obligations pursuant to the Regulatory Agreement.

3.15 Equal Opportunity. During the rehabilitation of the Project, there shall be no discrimination on the basis of race, color, religion, creed, sex, sexual orientation, marital status, ancestry or national origin in the hiring, firing, promoting or demoting of any person engaged in rehabilitation of the Project, and Developer shall direct its contractors and subcontractors to refrain from discrimination on such basis.

3.16 Prevailing Wage Requirements. Developer and its contractors and agents shall comply with California Labor Code Section 1720, *et seq.* and applicable federal labor laws and standards, and the regulations adopted pursuant thereto ("**Prevailing Wage Laws**"), and shall be responsible for carrying out the requirements of such provisions.

(a) All calls for bids, bidding materials and the construction contract documents for the Development must specify that:

(i) No contractor or subcontractor may be listed on a bid proposal nor be awarded a contract for the Project unless registered with the DIR pursuant to Labor Code Section 1725.5.

(ii) The Project is subject to compliance monitoring and enforcement by the DIR.

(b) The Developer, as the "awarding body", shall register the Project as required by Labor Code Section 1773.3 as set forth in the DIR's online form PWC-100 within two (2) days after entering into the Construction Contract and provide evidence of such registration to the City within two (2) days of such registration and any additional registration reporting to the DIR.

(c) In accordance with Labor Code Sections 1725.5 and 1771.1, the Developer shall require that its contractors and subcontractors be registered with the DIR, and maintain such registration as required by the DIR.

(d) Pursuant to Labor Code Section 1771.4, the Project is subject to compliance monitoring and enforcement by the DIR. The Developer shall and shall require its contractors and subcontractors to submit payroll and other records electronically to the DIR pursuant to Labor Code Sections 1771.4 and 1776 et seq., or in such other format as required by the DIR.

(e) The Developer shall and shall cause its contractors and subcontractors to keep and retain such records as are necessary to determine if prevailing wages have been paid as required pursuant to Labor Code Sections 1720 et seq., and that apprentices have been employed as required by Labor Code Section 1777.5 et seq., and shall, from time to time upon the request of the City provide to the City such records and other documentation reasonably requested by the City.

(f) The Developer shall and shall cause its respective contractors and subcontractors to comply with all other applicable provisions of Labor Code, including without limitation, Labor Code Sections 1720 et seq., 1725.5, 1771, 1771.1, 1771.4, 1776, 1777.5 et seq., 1810-1815 and implementing regulations of the DIR in connection with rehabilitation of the Development or any other work undertaken or in connection with the Property.

(g) Copies of the currently applicable current per diem prevailing wages are available from the DIR website, www.dir.ca.gov. The Developer shall cause its respective contractors to post the applicable prevailing rates of per diem wages at the Project site and to post job site notices, in compliance with Title 8 California Code of Regulations 16451(d) or as otherwise as required by the DIR.

Developer shall indemnify, defend (with counsel approved by City) and hold the City, and its respective elected and appointed officers, officials, employees, agents, consultants, and contractors (collectively, the **"Indemnitees"**), harmless from and against all liability, loss, cost, expense (including without limitation attorneys' fees and costs of litigation), claim, demand, action, suit, judicial or administrative proceeding, penalty, deficiency, fine, order, and damage (all of the foregoing collectively "**Claims**") which directly or indirectly, in whole or in part, are caused by, arise in connection with, result from, relate to, or are alleged to be caused by, arise in connection with, or relate to, the payment or requirement of payment of prevailing wages or the requirement of competitive bidding in the rehabilitation of the Project, the failure to comply with any state or federal labor laws, regulations or standards in connection with this Agreement, including but not limited to the Prevailing Wage Laws, or any act or omission of Developer related to this Agreement with respect to the payment or requirement of payment of prevailing wages or the requirement of competitive bidding, whether or not any insurance policies shall have been determined to be applicable to any such Claims. It is further agreed that City does not and shall not waive any rights against Developer which it may have by reason of this indemnity and hold harmless agreement because of the acceptance by City, or Developer's deposit with City of any of the insurance policies described in this Agreement. The provisions of this Section 3.17 shall survive the expiration or earlier termination of this Agreement and the issuance of a Certificate of Completion for the Project. Developer's indemnification obligations under this Section 3.17 shall not apply to any Claim which arises as a result of an Indemnitee's gross negligence or willful misconduct.

3.17 Compliance with Laws. Developer shall carry out and shall cause its contractors to carry out the rehabilitation of the Project in conformity with all applicable federal, state and local laws, rules, ordinances and regulations, including without limitation, all applicable federal and state labor laws and standards, the City zoning and development standards, building, plumbing, mechanical and electrical codes, all other provisions of the City's Municipal Code, and all applicable disabled and handicapped access requirements, including without limitation,

the Americans with Disabilities Act, 42 U.S.C. Section 12101, *et seq*., Government Code Section 4450, *et seq*., Government Code Section 11135, *et seq*., and the Unruh Civil Rights Act, Civil Code Section 51, *et seq*..

3.18 Liens and Stop Notices. Until the expiration of the term of the Regulatory Agreement and full repayment of the Loan, Developer shall not allow to be placed on the Property or any part thereof any lien or stop notice on account of materials supplied to or labor performed on behalf of Developer. If a claim of a lien or stop notice is given or recorded affecting the Project, Developer shall within thirty (30) days of such recording or service: (a) pay and discharge (or cause to be paid and discharged) the same; or (b) effect the release thereof by recording and delivering (or causing to be recorded and delivered) to the party entitled thereto a surety bond in sufficient form and amount or provide other assurance satisfactory to City that the claim of lien or stop notice will be paid or discharged.

3.19 Right of City to Satisfy Liens on the Property. If Developer fails to satisfy or discharge any lien or stop notice on the Property pursuant to Section 3.19 above, the City shall have the right, but not the obligation, to satisfy any such liens or stop notices at Developer's expense and without further notice to Developer. In such event Developer shall be liable for and shall immediately reimburse City for such paid lien or stop notice. Alternatively, the City may require Developer to immediately deposit with City the amount necessary to satisfy such lien or claim pending resolution thereof. The City may use such deposit to satisfy any claim or lien that is adversely determined against Developer. Developer shall file a valid notice of cessation or notice of completion upon cessation of rehabilitation of the Project for a continuous period of thirty (30) days or more, and shall take all other reasonable steps to forestall the assertion of claims or liens against the Property or the Project. The City may (but has no obligation to) record any notices of completion or cessation of labor, or any other notice that the City deems necessary or desirable to protect its interest in the Property and the Project.

ARTICLE IV
CITY FINANCIAL ASSISTANCE

4.1 Loan. The City shall provide a loan in the amount of Forty-Four Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($44,156,293.00) (the "**Loan**") to Developer upon the terms and conditions and for the purposes set forth in this Agreement. The Loan shall consist of Thirty-Eight Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($38,156,293.00) from the Homekey Grant and Six Million Dollars ($6,000,000) of City Funds. The Loan shall be evidenced by a promissory note (the "**Note**") substantially in the form attached hereto as Exhibit F, and shall be secured by a deed of trust (the"**Deed of Trust**") executed by Developer as Trustor substantially in the form attached hereto as Exhibit G and recorded against the Property subordinate only to such liens as City shall approve in writing. The outstanding principal balance of the City Funds portion of the Note will accrue simple interest at the rate of three percent (3%) per annum, and the outstanding balance of the Homekey Grant portion of the Note shall not accrue any interest.

Provided that Developer has complied with all conditions precedent to disbursement of

the Loan set forth in Section 4.5, the proceeds of the Loan ("**Loan Proceeds"**) shall be disbursed in accordance with Section 4.4 hereof. The Parties agree that City shall disburse Loan Proceeds only for the purposes set forth in Section 4.4.

4.2 Repayment of the Loan.

(a) Annual Payments. The Developer shall make annual payments of principal and interest to the City in the amount of the City Prorata Percentage of Residual Receipts. Such annual payments shall be due and payable in arrears no later than May 1 of each year with respect to the previous calendar year, commencing on May 1st of the first year after the City's issuance of a certificate of occupancy for the Improvements. The Developer shall provide the City with any documentation reasonably requested by the City to substantiate the Developer's determination of Residual Receipts. The Parties acknowledge that they expect the Residual Receipts amount to be zero during the initial years of the Project until Refinancing occurs. Repayments shall be credited first to interest, then to principal.

(b) Sharing of Residual Receipts with Other Lenders. The City acknowledges that the County of Alameda (the "**County**") and other lenders to be set forth in the Financing Plan may provide additional financing for the Project. The City agrees to share in sixty percent (60%) of seventy-five percent (75%) of Residual Receipts, pro-rata in proportion to the amount of City Funds and the financing provided by the County (the "**City Prorata Percentage**"). The Developer may pay the County up to forty percent (40%) of Seventy-Five Percent (75%) of the Residual Receipts, and may retain the remaining twenty-five percent (25%) of Residual Receipts.

(c) Default Under Project Homekey Agreement. In the event that one or both of the Parties is required to repay some or all of the Homekey Grant pursuant to the Project Homekey Agreement, Developer shall be responsible for making such payment to the State of California. The amount of Developer's repayment of the Homekey Grant shall be credited against the balance of the Note.

(d) Payment of Remaining Balance. Developer shall pay all outstanding principal and accrued interest on the City Loan, in full, on the earliest to occur of (i) a Developer Event of Default for which the City exercises its right to cause the Loan indebtedness to become immediately due and payable, and (ii) the expiration of the Term.

(e) Partial Forgiveness. Upon receipt of written confirmation from the State of California that the Parties' obligations under the Project Homekey Agreement have been satisfied and that the Parties are no longer responsible for repayment of the Homekey Grant under any circumstances, the Homekey Grant portion of the Loan shall be forgiven.

4.3 Security. As security for repayment of the Note, Developer shall execute the Deed of Trust pursuant to which City shall be provided a lien against the Property and the Improvements. The Deed of Trust shall be recorded in the Official Records concurrently with Developer's acquisition of the Property. The Deed of Trust may be subordinated only to such liens and subject only to such title exceptions as City may approve in writing.

4.4 Use and Disbursement of Proceeds. The Loan Proceeds shall be used as

follows: (a) a portion of the Loan Proceeds shall be used to fund the costs of Developer's acquisition of the Property, and closing, escrow and other costs approved by the City, (b) a portion of the Loan Proceeds shall be used to pay for predevelopment costs of the Project, to be funded at the close of escrow for Developer's acquisition of the Property, and (c) a portion of the Loan Proceeds shall be used to pay for the cost of rehabilitation of the Project, to be funded through monthly Loan draws after the close of escrow.

4.5 Conditions to Disbursement of Loan Proceeds. City's obligation to fund the Loan and disburse the Loan Proceeds for the purposes of Section 4.4(a) above is conditioned upon the satisfaction of all of the following conditions:

(a) Developer's delivery to City of each of the following: (i) certificate of good standing, certified by the Secretary of State indicating that Developer is properly organized, in good standing, and authorized to do business in the State of California, and a certified resolution indicating that Developer has authorized this transaction and that the persons executing this Agreement, the Regulatory Agreement, and the City Documents on Developer's behalf have been duly authorized to do so.

(b) The close of escrow for Developer's acquisition of the Property has occurred or will occur concurrently with the disbursement of the Loan.

(c) Developer's delivery to the City of evidence of insurance coverage in accordance with the requirements set forth in Section 11.2.

(d) Developer's delivery of the Note, Deed of Trust and Regulatory Agreement, each fully executed and acknowledged as applicable.

(e) Recordation of the Regulatory Agreement and the Deed of Trust in the Official Records simultaneously with the disbursement of the first Loan Proceeds.

(f) The Title Company's issuance of the City Title Policy, together with such endorsements as are required by the City, in accordance with Section 4.9 hereof.

(g) There exists no Default nor any act, failure, omission or condition that would constitute an event of Default under this Agreement.

(h) The City's receipt of a written requisition for disbursement of funds from Developer specifying the amount and use of the requested funds, accompanied by the title company's estimated settlement statement showing the acquisition price, closing costs and all other amounts due in escrow for Developer's acquisition of the Property.

City's obligation to disburse the Loan Proceeds for the purposes of Section 4.4(b) and (c) above is conditioned upon the satisfaction of all of the following conditions:

(i) The City's receipt of a written draw request for disbursement of funds from Developer specifying the amount and use of the requested funds, setting forth the proposed uses of funds consistent with the Financing Plan, the amount of funds needed, and, where

applicable, a copy of the bill or invoice covering a cost incurred or to be incurred, and City's inspection of the work and determination that the work for which payment is requested has been performed in compliance with the requirements of this Agreement.

(j) The Developer has submitted to the City all applications and materials for the permits and approvals necessary for the rehabilitation of any Improvements which are proposed to be funded through the City Loan, the application fees therefor have been paid to the City, and such applications shall have been be accepted as complete by the City.

4.6 No Obligation to Disburse Proceeds Upon Default. Notwithstanding any other provision of this Agreement, the City shall have no obligation to disburse or authorize the disbursement of any portion of the Loan Proceeds following:

(i) the failure of any of Developer's representations and warranties made in this Agreement or in connection with the Loan to be true and correct in all material respects;

(ii) the termination of this Agreement by mutual agreement of the Parties;

(iii) the conditions to disbursement of the Loan set forth in Section 4.5 have not been satisfied within the time frame set forth in Section 3.1, unless an extension of such date is approved by City in writing; or

(iv) the occurrence of an Event of Default under this Agreement, the Regulatory Agreement, any of the City Documents which remains uncured beyond any applicable cure period.

4.7 Prepayment; Acceleration

(a) Prepayment. Developer shall have the right to prepay the Loan at any time and from time to time, without penalty or premium, provided that any prepayment of principal mustbe accompanied by interest accrued but unpaid to the date of prepayment. Prepayments shall beapplied first to accrued but unpaid interest and then to principal. Any such prepayment shall have no effect upon Developer's obligations under the Regulatory Agreement which shall survive for the full term of the Regulatory Agreement.

(b) Due On Sale or Encumbrance. Unless City agrees otherwise in writing, the entire unpaid principal balance and all interest and other sums accrued under the Note shall be due and payable upon the Transfer (as defined in Section 7.2) absent the prior written consent of City of all or any part of or interest in the Property except for a Transfer permitted under Section 7.3 of this Agreement or as otherwise permitted pursuant to this Agreement.

4.8 Nonrecourse. Except as expressly provided in this Section 4.8, Developer shall have no personal liability for payment of the principal of, or interest on the Note, and the sole recourse of City with respect to the payment of the principal of, and interest on the Note shall be to the Property and the Improvements and any other collateral held by City as security for the Note; provided however, nothing contained in the foregoing limitation of liability shall: (i) limit or impair the enforcement against all such security for the Note of all the rights and remedies of

the City thereunder; (ii) be deemed in any way to impair the right of the City to assert the unpaid principal amount of the Note as demand for money within the meaning and intendment of Section 431.70 of the California Code of Civil Procedure or any successor provision thereto; or (iii) be deemed in any way to limit the rights of the City to obtain specific performance by the Developer of its covenants under the City Documents, other than the covenants to pay the City principal and interest due under the Note.

The foregoing limitation of liability is intended to apply only to the obligation for the repayment of the principal of, and payment of interest on the Note; nothing contained herein is intended to relieve the Developer of its obligation to indemnify the City under this Agreement, or liability to the extent of any loss for: (i) fraud or intentional misrepresentation or bad faith, waste, willful misrepresentation by the Developer; (ii) the failure to pay taxes, assessments or other charges which may create liens on the Property that are payable or applicable prior to any foreclosure under the Deed of Trust (to the full extent of such taxes, assessments or other charges); (iii) the fair market value of any personal property or fixtures removed or disposed of by the Developer other than in accordance with the Deed of Trust; and/or the misappropriation of any proceeds by the Developer under any insurance policies orawards resulting from condemnation or the exercise of the power of eminent domain or by reason of damage, loss or destruction to any portion of the Development.

4.9 Title Policy. Chicago Title Company shall issue an LP-10 loan policy of title insurance naming City as the insured, in a policy amount not less than the principal amount of Loan, showing Developer as holding fee title to the Property and insuring the Deed of Trust to be a valid first priority lien on the Property subject only to exceptions approved by City (the "**City Title Policy**"), together with such endorsements as are required by the City.

ARTICLE V
REFINANCING PLAN

5.1 Refinancing. The Parties acknowledge that the financing sources for the Project will need to be supplemented and revised over time in order to maintain the solvency of the Project for the entire term of the Loan and the Regulatory Agreement. On or before the tenth anniversary of the Effective Date, Developer shall prepare a revised Financing Plan (the "**Refinancing Plan**") which includes Developer's proposed new financing sources and modifications or extensions of existing financing for the Project which would close or become effective on or before the fifteenth anniversary of the Effective Date (the "**Refinancing**"). The Refinancing Plan may include an application for Low Income Housing Tax Credits, other governmental affordable housing loan and grant programs, a new allocation or extension of the allocation of project based vouchers for Project residents, tax-exempt or taxable bond financing, commercial loans, amendments to the City Loan, and/or other sources. The Refinancing Plan shall be subject to the approval of the City, which approval shall not unreasonably be withheld. Developer shall use diligent and good faith efforts to obtain the Refinancing elements set forth in the approved Refinancing Plan.

ARTICLE VI
USE OF THE PROPERTY

6.1 Use; Affordable Supportive Housing. Developer covenants and agrees for itself and its successors and assigns that the Property shall be used for the development and operation of the Project in accordance with the terms and conditions of this Agreement, the Project Homekey Agreement and the Regulatory Agreement.

6.2 Affordable Housing. Developer covenants and agrees for itself, its successors and assigns that one hundred twenty-four (124) of the residential units developed within the Project shall be occupied by and rented at an affordable rent to households of extremely low-income in accordance with the terms hereof and the Regulatory Agreement. The Parties shall execute the Regulatory Agreement, substantially in the form attached hereto as Exhibit H, concurrently with the execution of this Agreement. The Regulatory Agreement shall be recorded in the Official Records of Alameda County ("**Official Records**") on the date that Developer acquires the Property.

6.3 Maintenance. Developer shall at its own expense, maintain the Property, the Improvements and related landscaping and common areas in good physical condition, in good repair, and in decent, safe, sanitary, habitable and tenantable living conditions in conformity with all applicable state, federal, and local laws, ordinances, codes, and regulations, consistent with the standards of maintenance of similar multifamily apartment complexes in Alameda County. Without limiting the foregoing, Developer agrees to maintain the Project and the Property (including without limitation, the residential units, common areas, landscaping, driveways, parking areas and walkways) in a condition free of all waste, nuisance, debris, unmaintained landscaping, graffiti, disrepair, abandoned vehicles/appliances, and illegal activity, and shall take all reasonable steps to prevent the same from occurring on the Property or at the Project. Developer shall prevent and/or rectify any physical deterioration of the Property and the Project and shall make all repairs, renewals and replacements necessary to keep the Property and the Project in good condition and repair. Developer shall provide adequate security services for occupants of the Project.

6.4 Taxes and Assessments. Developer shall pay all real and personal property taxes, assessments and charges and all franchise, income, payroll, withholding, sales, and other taxes assessed against the Property and payable by Developer, at such times and in such manner as to prevent any penalty from accruing, or any lien or charge from attaching to the Property; provided, however, that Developer shall have the right to contest in good faith, any such taxes, assessments, or charges. In the event the Developer exercises its right to contest any tax, assessment, or charge, the Developer, on final determination of the proceeding or contest, shall immediately pay or discharge any decision or judgment rendered against it, together with all costs, charges and interest. Developer shall have the right to apply for all applicable tax exemptions, including, without limitation, the welfare exemption from property tax for low-income housing.

6.5 Obligation to Refrain from Discrimination. Developer shall not restrict the rental, sale, lease, sublease, transfer, use, occupancy, tenure or enjoyment of the Property, or any portion thereof, on the basis of race, color, religion, creed, sex, sexual orientation, disability, marital status, ancestry, or national origin of any person. Developer covenants for itself and all persons claiming under or through it, and this Agreement is made and accepted upon and subject

to the condition that there shall be no discrimination against or segregation of any person or group of persons on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the sale, lease, sublease, transfer, use, occupancy, tenure or enjoyment of the Property or part thereof, nor shall Developer or any person claiming under or through Developer establish or permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, subtenants, sublessees or vendees in, of, or for the Property or part thereof. Developer shall include such provision in all deeds, leases, contracts and other instruments executed by Developer, and shall enforce the same diligently and in good faith.

6.6 Compliance with Project Homekey Agreement. The Parties agree that, regardless of whether the City is jointly or solely responsible for performance of the requirements of the Project Homekey Agreement under the terms of that agreement, the Developer shall perform all of the requirements of the Grantee under the Project Homekey Agreement, and City shall not be responsible for performance of such obligations. Such requirements to be performed by the Developer shall include, without limitation, compliance with maximum income and rent requirements, meeting all program deadlines, compliance with all rent standards, use in accordance with eligible uses, compliance with all performance milestones, preparation and submission of all required reporting, compliance with all conditions of disbursement of the Homekey Grant, compliance with prevailing wage laws, liability for environmental requirements, insurance requirements, relocation requirements, and adaptability and accessibility requirements, submission and compliance with the property management plan, supportive services plan and affirmative fair housing marketing plan, compliance with fair housing requirements, and compliance with record retention, inspection and audit requirements.

ARTICLE VII

LIMITATIONS ON CHANGE IN OWNERSHIP, MANAGEMENT AND CONTROL OF DEVELOPER

7.1 Change Pursuant to this Agreement. Developer has represented that it possesses the necessary expertise, skill and ability to carry out the development and operation of the Project on the Property pursuant to this Agreement. The qualifications, experience, financial capacity and expertise of Developer is of particular concern to the City. It is because of these qualifications, experience, financial capacity and expertise that the City has entered into this Agreement with Developer. No voluntary or involuntary successor, assignee or transferee of Developer shall acquire any rights or powers under this Agreement, except as expressly provided herein.

7.2 Prohibition on Transfer. Prior to the expiration of the term of the Regulatory Agreement, Developer shall not, except as expressly permitted by this Agreement, directly or indirectly, voluntarily, involuntarily or by operation of law make or attempt any total or partial sale, transfer, conveyance, assignment or lease (collectively, "**Transfer**") of the whole or any part of the Property, the Project, the Improvements, or this Agreement, without the prior written approval of City. Any such attempt to assign this Agreement without the City's consent shall be

null and void and shall confer no rights or privileges upon the purported assignee. In addition to the foregoing, prior to the expiration of the term of the Regulatory Agreement, except as expressly permitted by this Agreement, Developer shall not undergo any significant change of ownership without the prior written approval of City. For purposes of this Agreement, a "significant change of ownership" shall mean a transfer of the beneficial interest of more than twenty-five percent (25%) in aggregate of the present ownership and /or control of Developer, taking all transfers into account on a cumulative basis.

7.3 Permitted Transfers. Notwithstanding any contrary provision hereof, the prohibitions set forth in this Article shall not be deemed to prevent: (i) the granting of utility easements or permits to facilitate development of the Property; (ii) the dedication of any property required pursuant to this Agreement; (iii) the lease of individual units to tenants for occupancy as their principal residence in accordance with the Project Homekey Agreement and the Regulatory Agreement; (iv) assignments creating security interests for the purpose of financing the acquisition, construction or permanent financing of the Project or the Property in accordance with the approved Financing Plan and subject to the requirements of Article VIII, or Transfers directly resulting from the foreclosure of, or granting of a deed in lieu of foreclosure of, such a security interest; and (v) a Transfer to entity which is under the direct control or under common control with Allied Housing or in which Allied Housing is the sole member or the general partner ("**Controlled Affiliate**").

7.4 Requirements for Proposed Transfers. The City may, in the exercise of its sole discretion, consent to a proposed Transfer of this Agreement, the Property or portion thereof if all of the following requirements are met (provided however, the requirements of this Section 7.4 shall not apply to Transfers described in Section 7.3):

(i) The proposed transferee demonstrates to the City's satisfaction that it has the qualifications, experience and financial resources necessary and adequate as may be reasonably determined by the City to competently complete rehabilitation of the Project and to otherwise fulfill the obligations undertaken by the Developer under this Agreement.

(ii) The Developer and the proposed transferee shall submit for City review and approval all instruments and other legal documents proposed to effect any Transfer of this Agreement, the Property or interest therein together with such documentation of the proposed transferee's qualifications and development capacity as the City may reasonably request.

(iii) The proposed transferee shall expressly assume all of the rights and obligations of the Developer under this Agreement, the Project Homekey Agreement, the Regulatory Agreement, the City Documents arising after the effective date of the Transfer and all obligations of Developer arising prior to the effective date of the Transfer (unless Developer expressly remains responsible for such obligations) and shall agree to be subject to and assume all of Developer's obligations pursuant to the Conditions of Approval and all other conditions, and restrictions set forth in this Agreement and the Regulatory Agreement.

(iv) The Transfer shall be effectuated pursuant to a written instrument satisfactory to the City in form recordable in the Official Records.

Consent to any proposed Transfer may be given by the City Manager unless the City Manager, in his or her discretion, refers the matter of approval to the City Council. If the City rejects a proposed Transfer, the City, as applicable, shall provide the reasons for such rejection in writing within thirty (30) days following receipt of written request by Developer, and representatives of the City shall meet with Developer and the proposed transferee to discuss in good faith the reasons for the rejection and Developer's and transferee's responses thereto.

7.5 Effect of Transfer without City Consent.

7.5.1 In the absence of specific written agreement by the City, no Transfer by Developer shall be deemed to relieve the Developer or any other party from any obligation under this Agreement or the Regulatory Agreement.

7.5.2 Without limiting any other remedy City may have under this Agreement, or under law or equity, this Agreement may be terminated by City if without the prior written approval of the City, Developer assigns or Transfers this Agreement or the Property. This Section 7.5.2 shall not apply to Transfers described in clauses (i) through (iv) of Section 7.3).

7.6 Recovery of City Costs. Developer shall reimburse City for all costs, including but not limited to attorneys' fees, incurred in reviewing instruments and other legal documents proposed to affect a Transfer under this Agreement and in reviewing the qualifications and financial resources of a proposed successor, assignee, or transferee within ten days following City's delivery to Developer of an invoice detailing such costs. This Section 7.6 shall not apply to Transfers described in Section 7.3.

ARTICLE VIII
SECURITY FINANCING AND RIGHTS OF MORTGAGEES

8.1 Mortgages and Deeds of Trust for Development. Mortgages and deeds of trust, or any other reasonable security instrument are permitted to be placed upon the Property only for the purpose of securing loans approved pursuant to the approved Financing Plan for the purpose of financing the acquisition of the Property, the design and rehabilitation of the Improvements, other expenditures reasonably necessary for development of the Property pursuant to this Agreement, and the rehabilitation and/or refinancing of the Project. Developer shall not enter into any conveyance for such financing without the prior written approval of the City Manager or his or her designee. As used herein, the terms "mortgage" and "deed of trust" shall mean any security instrument used in financing real estate acquisition, rehabilitation and land development.

8.2 Holder Not Obligated to Construct. The holder of any mortgage, deed of trust authorized by this Agreement shall not be obligated to construct or complete the Improvements or to guarantee such rehabilitation or completion. Nothing in this Agreement shall be deemed topermit or authorize any such holder to devote the Property or any portion thereof to any uses, orto construct any improvements thereon, other than those uses or improvements provided for

or authorized by this Agreement.

8.3 Notice of Default and Right to Cure. Whenever City delivers any notice of default hereunder, City shall concurrently deliver a copy of such notice to each holder of record of any mortgage or deed of trust secured by the Property provided that City has been provided with the address for delivery of such notice. City shall have no liability to any such holder for any failure by the City to provide such notice to such holder. Each such holder shall have the right, but not the obligation, at its option, to cure or remedy any such default or breach.

8.4 City Right to Cure Defaults. In the event of a breach or default by Developer under a mortgage or deed of trust secured by the Property, City may (but has no obligation to) cure the default, without acceleration of the subject loan, following prior notice thereof to the holder of such instrument and Developer. In such event, Developer shall be liable for, and City shall be entitled to reimbursement from Developer for all costs and expenses incurred by City associated with and attributable to the curing of the default or breach and such sum shall constitute a part of the indebtedness secured by the Deed of Trust.

8.5 Holder to be Notified. Developer, for itself, its successors and assigns hereby warrants and agrees that each term contained herein dealing with security financing and rights of holders shall be either inserted into the relevant deed of trust or mortgage or acknowledged by the holder prior to its creating any security right or interest in the Property.

8.6 Modifications to Agreement. City shall not unreasonably withhold is consent to modifications of this Agreement requested by Project lenders or investors provided such modifications do not alter City's substantive rights and obligations under this Agreement.

8.7 Estoppel Certificates. Any Party shall, at any time, and from time to time, within thirty (30) days after receipt of written request from the other Party, execute and deliver to such Party a written statement certifying that, to the knowledge of the certifying Party: (i) this Agreement is in full force and effect and a binding obligation of the Parties (if such be the case), (ii) this Agreement has not been amended or modified, or if so amended, identifying the amendments, and (iii) the requesting Party is not in default in the performance of its obligations under this Agreement, or if in default, describing the nature of any such defaults.

ARTICLE IX
ENVIRONMENTAL MATTERS

9.1 No City Liability; Developer's Covenants. City shall not be responsible for the cost of any soil, groundwater or other environmental remediation or other response activities for any Hazardous Materials, if any, existing or occurring on the Property or any portion thereof, and Developer shall be solely responsible for all actions and costs associated with any such activities required by any regulatory agency with jurisdiction over the Property and/or required for the development of the Project, the Property, or any portion thereof. Upon receipt of any notice regarding the presence, release or discharge of Hazardous Materials in, on or under the Property, or any portion thereof, Developer agrees to timely initiate and diligently pursue and complete all appropriate response, remediation and removal actions for the presence, release or discharge of

such Hazardous Materials within such deadlines as specified by applicable Environmental Laws. Developer hereby covenants and agrees that:

(1) Developer shall not knowingly permit the Project or the Property or any portion of either to be a site for the use, generation, treatment, manufacture, storage, disposal or transportation of Hazardous Materials or otherwise knowingly permit the presence or release of Hazardous Materials in, on, under, about or from the Project or the Property with the exception of any previously disclosed existing conditions on the Property and cleaning supplies and other materials customarily used in construction, rehabilitation, use or maintenance of residential property and used, stored and disposed of in compliance with Hazardous Materials Laws, and

(2) Developer shall keep and maintain the Project and the Property and each portion thereof in compliance with, and shall not cause or permit the Project or the Property or any portion of either to be in violation of, any Hazardous Materials Laws.

9.2 Environmental Indemnification. Developer shall indemnify, defend (with counsel approved by City) and hold the Indemnitees harmless from and against any and all Claims, including without limitation any expenses associated with the investigation, assessment, monitoring, response, removal, treatment, abatement or remediation of Hazardous Materials and administrative, enforcement or judicial proceedings resulting, arising, or based directly or indirectly in whole or in part, upon (i) the presence, release, use, generation, discharge, storage or disposal or the alleged presence, release, discharge, storage or disposal of any Hazardous Materials on, under, in or about, or the transportation of any such Hazardous Materials to or from, the Property, or (ii) the failure of Developer, Developer's employees, agents, contractors, subcontractors, or any person acting on behalf of any of the foregoing to comply with Hazardous Materials Laws or the covenants set forth in Section 9.1. The foregoing indemnity shall further apply to any residual contamination in, on, under or about the Property or affecting any natural resources, and to any contamination of any property or natural resources arising in connection with the generation, use, handling, treatment, storage, transport or disposal of any such Hazardous Materials, and irrespective of whether any of such activities were or will be undertaken in accordance with Hazardous Materials Laws. The provisions of this Section 9.2 shall survive the issuance of a Certificate of Completion for the Project and the expiration or earlier termination of this Agreement. Developer's indemnification obligation under this Section 9.2 shall not apply to acts described in clause (i) above caused by the gross negligence or willful misconduct of an Indemnitee.

9.2.1 No Limitation. Developer hereby acknowledges and agrees that Developer's duties, obligations and liabilities under this Agreement, including, without limitation, under Section 9.2 above, are in no way limited or otherwise affected by any information the City may have concerning the Property and/or the presence in, on, under or about the Property of any Hazardous Materials, whether the City obtained such information from the Developer or from its own investigations. It is further agreed that City do not and shall not waive any rights against Developer that they may have by reason of this indemnity and hold harmless agreement because of the acceptance by City, or the deposit with City by Developer, of any of the insurance policies described in this Agreement.

9.3 Hazardous Materials. As used herein, the term **"Hazardous Materials"** means any substance, material or waste which is or becomes regulated by any federal, state or local governmental authority, and includes without limitation (i) petroleum or oil or gas or any direct or indirect product or by-product thereof; (ii) asbestos and any material containing asbestos; (iii) any substance, material or waste regulated by or listed (directly or by reference) as a "hazardous substance", "hazardous material", "hazardous waste", "toxic waste", "toxic pollutant", "toxic substance", "solid waste" or "pollutant or contaminant" in or pursuant to, or similarly identified as hazardous to human health or the environment in or pursuant to, the Toxic Substances Control Act [15 U.S.C. 2601, et seq.]; the Comprehensive Environmental Response, Compensation and Liability Act [42 U.S.C. Section 9601, et seq.], the Hazardous Materials Transportation Authorization Act [49 U.S.C. Section 5101, et seq.], the Resource Conservation and Recovery Act [42 U.S.C. 6901, et seq.], the Federal Water Pollution Control Act [33 U.S.C. Section 1251], the Clean Air Act [42 U.S.C. Section 7401, et seq.], the California Underground Storage of Hazardous Substances Act [California Health and Safety Code Section 25280, et seq.], the California Hazardous Substances Account Act [California Health and Safety Code Section 25300, et seq.], the California Hazardous Waste Act [California Health and Safety Code Section 25100, et seq.], the California Safe Drinking Water and Toxic Enforcement Act [California Health and Safety Code Section 25249.5, et seq.], and the Porter-Cologne Water Quality Control Act [California Water Code Section 13000, et seq.], as they now exist or are hereafter amended, together with any regulations promulgated thereunder; (iv) any substance, material or waste which is defined as such or regulated by any "Superfund" or "Superlien" law, or any Environmental Law; or (v) any other substance, material, chemical, waste or pollutant identified as hazardous or toxic and regulated under any other federal, state or local environmental law, including without limitation, asbestos, polychlorinated biphenyls, petroleum, natural gas and synthetic fuel products and by-products.

9.4 Environmental Laws. As used herein, the term "**Environmental Laws**" means all federal, state or local statutes, ordinances, rules, regulations, orders, decrees, judgments or common law doctrines, and provisions and conditions of permits, licenses and other operating authorizations regulating, or relating to, or imposing liability or standards of conduct concerning (i) pollution or protection of the environment, including natural resources; (ii) exposure of persons, including employees and agents, to Hazardous Materials (as defined above) or other products, raw materials, chemicals or other substances; (iii) protection of the public health or welfare from the effects of by-products, wastes, emissions, discharges or releases of chemical substances from industrial or commercial activities; (iv) the manufacture, use or introduction into commerce of chemical substances, including without limitation, their manufacture, formulation, labeling, distribution, transportation, handling, storage and disposal; or (iv) the use, release or disposal of toxic or hazardous substances or Hazardous Materials or the remediation of air, surface waters, groundwater or soil, as now or may at any later time be in effect, including but not limited to the Toxic Substances Control Act [15 U.S.C. 2601, et seq.]; the Comprehensive Environmental Response, Compensation and Liability Act [42 U.S.C. Section 9601, et seq.], the Hazardous Materials Transportation Authorization Act [49 U.S.C. Section 5101, et seq.], the Resource Conservation and Recovery Act [42 U.S.C. 6901, et seq.], the Federal Water Pollution Control Act [33 U.S.C. Section 1251], the Clean Air Act [42 U.S.C. Section 7401, et seq.], the California Underground Storage of Hazardous Substances Act [California Health and Safety Code Section 25280, et seq.], the California Hazardous Substances Account Act [California

Health and Safety Code Section 25300, et seq.], the California Hazardous Waste Act [California Health and Safety Code Section 25100, et seq.], the California Safe Drinking Water and Toxic Enforcement Act [California Health and Safety Code Section 25249.5, et seq.], and the Porter-Cologne Water Quality Control Act [California Water Code Section 13000, et seq.], as each of the foregoing now exist or are hereafter amended, together with any regulations promulgated thereunder.

ARTICLE X
DEFAULTS, REMEDIES AND TERMINATION

10.1 Event of Developer Default. The following events shall constitute an event of default on the part of Developer ("**Event of Developer Default**"):

(a) Subject to force majeure, Developer fails to commence or complete rehabilitation of the Project within the times set forth in Section 3.6, or abandons or suspends rehabilitation ofthe Project prior to completion for a period of sixty (60) days or more;

(b) Developer fails to pay when due the principal and interest (if any) payable under the Note and such failure continues for thirty (30) days after City notifies Developer thereof in writing;

(c) Developer fails to timely repay the required portion of the Homekey Grant to the State of California upon demand of the State of California pursuant to the Project Homekey Agreement;

(d) A Transfer occurs, either voluntarily or involuntarily, in violation of Article VII;

(e) Developer fails to maintain insurance on the Property and the Project as required pursuant to this Agreement, and Developer fails to cure such default within ten (10) days, following notice thereof from the City;

(f) Subject to Developer's right to contest the following charges pursuant to Section 6.3, if Developer fails to pay prior to delinquency taxes or assessments due on the Property or the Project or fails to pay when due any other charge that may result in a lien on the Property or the Project, and Developer fails to cure such default within 30 days of date of delinquency, but in all events upon the imposition of any such tax or other lien;

(g) A default is declared in writing under any loan secured by a mortgage, deed of trust or other security instrument recorded against the Property and remains uncured beyond any applicable cure period such that the holder of such security instrument has the right to accelerate repayment of such loan;

(h) Any representation or warranty contained in this Agreement or in any financial statement, certificate or report submitted to the City in connection with this Agreement or Developer's request for the Loan proves to have been false in any material and adverse respect when made and continues to be materially adverse to the City;

(i) If, pursuant to or within the meaning of the United States Bankruptcy Code or any other federal or state law relating to insolvency or relief of debtors ("**Bankruptcy Law**"), Developer (i) commences a voluntary case or proceeding; (ii) consents to the entry of an order for relief against Developer in an involuntary case; (iii) consents to the appointment of a trustee, receiver, assignee, liquidator or similar official for Developer; (iv) makes an assignment for the benefit of its creditors; or (v) admits in writing its inability to pay its debts as they become due;

(j) A court of competent jurisdiction shall have made or entered any decree or order (1) adjudging the Developer to be bankrupt or insolvent, (2) approving as properly filed a petition seeking reorganization of the Developer or seeking any arrangement for Developer under bankruptcy law or any other applicable debtor's relief law or statute of the United States or any state or other jurisdiction, (3) appointing a receiver, trustee, liquidator, or assignee of the Developer in bankruptcy or insolvency or for any of its properties, or (4) directing the winding up or liquidation of the Developer;

(k) Developer shall have assigned its assets for the benefit of its creditors (other than pursuant to a mortgage loan) or suffered a sequestration or attachment of or execution on any substantial part of its property, unless the property so assigned, sequestered, attached or executed upon shall have been returned or released within sixty (60) days after such event (unless a lesser time period is permitted for cure under any other mortgage on the Property, in which event such lesser time period shall apply under this subsection as well) or prior to any sooner sale pursuant to such sequestration, attachment, or execution;

(l) The Developer shall have voluntarily suspended its business or Developer shall have been dissolved or terminated;

(m) An event of default arises under this Agreement, the Project Homekey Agreement, the Regulatory Agreement, or any City Document and remains uncured beyond any applicable cure period; or

(n) Developer defaults in the performance of any term, provision, covenant or agreement contained in this Agreement other than an obligation enumerated in this Section 10.1 and unless a shorter cure period is specified for such default, the default continues for ten (10) days in the event of a monetary default or thirty (30) days in the event of a nonmonetary default after the date upon which City shall have given written notice of the default to Developer; provided however, if the default is of a nature that it cannot be cured within 30 days, a Developer Event of Default shall not arise hereunder if Developer commences to cure the default within thirty (30) days and thereafter prosecutes the curing of such default with due diligence and in good faith to completion and in no event later than ninety (90) days after receipt of notice of the default or such longer period as the City may allow.

10.2 City Default. An event of default on the part of City ("**Event of City Default**") shall arise hereunder if City fails to keep, observe, or perform any of its covenants, duties, or obligations under this Agreement, and the default continues for a period of thirty (30) days after written notice thereof from Developer to City, or in the case of a default which cannot with due diligence be cured within thirty (30) days, City fails to commence to cure the default within thirty (30) days of such notice and thereafter fails to prosecute the curing of such default with

due diligence and in good faith to completion.

10.3 City's Right to Terminate Agreement. If an Event of Developer Default shall occur and be continuing beyond any applicable cure period, then City shall, in addition to other rights available to it under law or this Agreement, have the right to terminate this Agreement. If City makes such election, City shall give written notice to Developer and to any mortgagee entitled to such notice specifying the nature of the default and stating that this Agreement shall expire and terminate on the date specified in such notice, and upon the date specified in the notice, this Agreement and all rights of Developer under this Agreement, shall expire and terminate.

10.4 City's Remedies and Rights Upon an Event of Developer Default. Upon the occurrence of an Event of Developer Default and the expiration of any applicable cure period, City shall have all remedies available to them under law or equity, including, but not limited to the following, City may, at its election, without notice to or demand upon Developer, except for notices or demands required by law or expressly required pursuant to this Agreement, the Regulatory Agreement, or the City Documents, exercise one or more of the following remedies:

(a) Accelerate and declare the balance of the City Funds portion of the Note and interest accrued thereon immediately due and payable;

(b) If the Event of Developer Default arises pursuant to Section 10.1(c) above, accelerate and declare the Homekey Grant portion of the Note immediately due and payable;

(c) Seek specific performance to enforce the terms of this Agreement or City Documents;

(d) Foreclose on the Property pursuant to the Deed of Trust;

(e) Pursue any and all other remedies available under law to enforce the terms of the this Agreement and the City Documents and City's rights thereunder.

10.5 Developer's Remedies Upon an Event of City Default. Upon the occurrence of an City Event of Default, in addition to pursuing any other remedy allowed at law or in equity or otherwise provided in this Agreement, Developer may bring an action for equitable relief seeking the specific performance of the terms and conditions of this Agreement, and/or enjoining, abating, or preventing any violation of such terms and conditions, and/or seeking to obtain any other remedy consistent with the purpose of this Agreement.

10.6 Remedies Cumulative; No Consequential Damages. Except as otherwise expressly stated in this Agreement, the rights and remedies of the Parties are cumulative, and the exercise by any Party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different time, of any other rights or remedies for the same or any other default by the other Party. Notwithstanding anything to the contrary set forth herein, a party's right to recover damages in the event of a default shall be limited to actual damages and shall exclude

consequential damages.

10.7 Inaction Not a Waiver of Default. No failure or delay by any Party in asserting any of its rights and remedies as to any default shall operate as a waiver of such default or of any such rights or remedies, nor deprive any Party of its rights to institute and maintain any action or proceeding which it may deem necessary to protect, assert or enforce any such rights or remedies in the same or any subsequent default.

ARTICLE XI
INDEMNITY AND INSURANCE.

11.1 Indemnity. Developer shall indemnify, defend (with counsel approved by City) and hold Indemnitees harmless from and against any and all Claims, including without limitation, Claims arising directly or indirectly, in whole or in part, as a result of or in connection with Developer's or Developer's contractors, subcontractors, agents or employees development, rehabilitation, improvement, operation, ownership or maintenance of the Project or the Property, or any part thereof or otherwise arising out of or in connection with Developer's performance under this Agreement. Developer's indemnification obligations under this Section 11.1 shall not extend to Claims resulting from the gross negligence or willful misconduct of Indemnitees. The provisions of this Section 11.1 shall survive the issuance of a Certificate of Completion for the Project and the expiration or earlier termination of this Agreement. It is further agreed that City do not and shall not waive any rights against Developer that they may have by reason of this indemnity and hold harmless agreement because of the acceptance by City, or the deposit with City by Developer, of any of the insurance policies described in this Agreement.

11.2 Insurance.

(a) Developer and all contractors working on behalf of Developer on the Project shall maintain the insurance coverage as described in the City Insurance Requirements attached hereto Exhibit I and incorporated herein.

(b) Prior to closing of the Loan, Developer shall furnish City with certificates of insurance in form acceptable to City evidencing the required insurance coverage and duly executed endorsements evidencing such additional insured status. Each certificate shall contain all provisions required in the City Insurance Requirements.

(c) If any insurance policy or coverage required hereunder is canceled or reduced, Developer shall, within fifteen (15) days after receipt of notice of such cancellation or reduction in coverage, but in no event later than the effective date of cancellation or reduction, file with City a certificate showing that the required insurance has been reinstated or provided through another insurance company or companies. Upon failure to so file such certificate, City may, without further notice and at its option, procure such insurance coverage at Developer's expense, and Developer shall promptly reimburse City for such expense upon receipt of billing from City.

ARTICLE XII
MISCELLANEOUS PROVISIONS

12.1 No Brokers. Each Party warrants and represents to the other that no person or entity can properly claim a right to a real estate commission, brokerage fee, finder's fee, or other compensation with respect to the transactions contemplated by this Agreement. Each Party agrees to defend, indemnify and hold harmless the other Party from any claims, expenses, costs or liabilities arising in connection with a breach of this warranty and representation. The terms of this Section shall survive the expiration or earlier termination of this Agreement.

12.2 Enforced Delay; Extension of Times of Performance. Subject to the limitations setforth below, performance by any Party shall not be deemed to be in default, and all performance and other dates specified in this Agreement shall be extended where delays are due to: war, insurrection, strikes, lockouts, riots, floods, earthquakes, fires, casualties, acts of God, acts of the public enemy, epidemics, quarantine restrictions, freight embargoes, governmental restrictions orpriority, litigation, including court delays, unusually severe weather, acts or omissions of the other Parties, acts or failures to act of any other public or governmental agency or entity (other than the acts or failures to act of City which shall not excuse performance by City), or any other cause beyond the affected Party's reasonable control. An extension of time for any such cause shall be for the period of the enforced delay and shall commence to run from the time of the commencement of the cause, if notice by the Party claiming such extension is sent to the other Parties within thirty (30) days of the commencement of the cause and such extension is not rejected in writing by the other Parties within ten (10) days of receipt of the notice. None of theParties shall unreasonably withhold consent to an extension of time pursuant to this Section.

Times of performance under this Agreement may also be extended in writing by the mutual agreement of Developer and City (acting in the discretion of its City Manager unless he or she determines in his or her discretion to refer such matter to the City Council). City and Developer acknowledge that adverse changes in economic conditions, either of the affected Party specifically or the economy generally, changes in market conditions or demand, and/or inability to obtain financing to complete the work of Improvements shall not constitute grounds of enforced delay pursuant to this Section. Each Party expressly assumes the risk of such adverse economic or market changes and/or financial inability, whether or not foreseeable as of the Effective Date.

12.3 Notices. Except as otherwise specified in this Agreement, all notices to be sent pursuant to this Agreement shall be made in writing, and sent to the Parties at their respective addresses specified below or to such other address as a Party may designate by written notice delivered to the other parties in accordance with this Section. All such notices shall be sent by: (d)personal delivery, in which case notice is effective upon delivery; (ii) certified or registered mail, return receipt requested, in which case notice shall be deemed delivered on receipt if delivery is confirmed by a return receipt; (iii) nationally recognized overnight courier, with charges prepaid or charged to the sender's account, in which case notice is effective on delivery if delivery is confirmed by the delivery service;

City: City of Newark
37101 Newark Blvd.
Newark, CA 94560
Attention: City Manager

Developer: Allied 39802 Cedar, LLC
c/o Allied Housing, Inc.
40849 Fremont Blvd.
Fremont, CA 94538
Attention: Chief Executive Officer

With a copy to: Gubb & Barshay LLP
235 Montgomery Street, Suite 1110
San Francisco, CA 94194
Attention: Nicole Kline

12.4 Attorneys' Fees. If any Party fails to perform any of its obligations under this Agreement, or if any dispute arises between the Parties concerning the meaning or interpretation of any provision hereof, then the prevailing party in any proceeding in connection with such dispute shall be entitled to the costs and expenses it incurs on account thereof and in enforcing or establishing its rights hereunder, including, without limitation, court costs and reasonable attorneys' fees and disbursements.

12.5 Waivers; Modification. No waiver of any breach of any covenant or provision of this Agreement shall be deemed a waiver of any other covenant or provision hereof, and no waiver shall be valid unless in writing and executed by the waiving party. An extension of time for performance of any obligation or act shall not be deemed an extension of the time for performance of any other obligation or act, and no extension shall be valid unless in writing and executed by the waiving party. This Agreement may be amended or modified only by a written instrument executed by the Parties.

12.6 Binding on Successors. Subject to the restrictions on Transfers set forth in Article VII, this Agreement shall bind and inure to the benefit of the Parties and their respective permitted successors and assigns. Any reference in this Agreement to a specifically named party shall be deemed to apply to any permitted successor and assign of such party who has acquired an interest in compliance with this Agreement or under law.

12.7 Construction. The section headings and captions used herein are solely for convenience and shall not be used to interpret this Agreement. The Parties acknowledge that this Agreement is the product of negotiation and compromise on the part of both Parties, and the Parties agree, that since all of the Parties have participated in the negotiation and drafting of this Agreement, this Agreement shall not be construed as if prepared by one of the Parties, but rather according to its fair meaning as a whole, as if all Parties had prepared it.

12.8 Action or Approval. Except as may be otherwise specifically provided in this Agreement, whenever any approval, notice, direction, finding, consent, request, waiver, or other action by the City is required or permitted under this Agreement, such action may be given, made, or taken by the City Manager, or by any person who shall have been designated in writing to the Developer by the City, without further approval by the City Council. Any such action shall be in writing. The Developer acknowledges that nothing in this Agreement (including any approval by the City Manager in accordance with this Agreement) shall limit, waive, or otherwise impair the authority and discretion of: (i) the City's Community Development Department, in connection with the review and approval of the proposed construction plans for the Development (or any change to such plans), or any use, or proposed use, of the Property, (ii) the City's issuance of a building permit, or (iii) any other office or department of the City acting in its capacity as a governmental regulatory authority with jurisdiction over the development, use, or operation of the Development.

12.9 Entire Agreement. This Agreement, including the exhibits listed below, which are attached hereto and incorporated herein by this reference, together with the Regulatory Agreement, the City Documents contains the entire agreement between the Parties with respect to the subject matter hereof, and supersedes all prior written or oral agreements, understandings, representations or statements between the Parties with respect to the subject matter hereof.

Exhibit A	Legal Description of Property
Exhibit B	Scope of Development
Exhibit C	Schedule of Performance
Exhibit D	Financing Plan
Exhibit E	Form of Certificate of Completion
Exhibit F	Form of Promissory Note
Exhibit G	Form of Deed of Trust
Exhibit H	Form of Regulatory Agreement
Exhibit I	City Insurance Requirements

12.10 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be an original and all of which taken together shall constitute one instrument. The signature page of any counterpart may be detached therefrom without impairing the legal effect of the signature(s) thereon provided such signature page is attached to any other counterpart identical thereto having additional signature pages executed by the other Parties. Any executed counterpart of this Amendment may be delivered to the other Parties by facsimile and shall be deemed as binding as if an originally signed counterpart was delivered.

12.11 Severability. If any term, provision, or condition of this Agreement is held by a court of competent jurisdiction to be invalid or unenforceable, the remainder of this Agreement shall continue in full force and effect unless an essential purpose of this Agreement is defeated by such invalidity or unenforceability.

12.12 No Third Party Beneficiaries. Nothing contained in this Agreement is intended to or shall be deemed to confer upon any person, other than the Parties and their respective successors and assigns, any rights or remedies hereunder.

12.13 Parties Not Co-Venturers. Nothing in this Agreement is intended to or shall establish the Parties as partners, co-venturers, or principal and agent with one another.

12.14 Non-Liability of Officials, Employees and Agents. No officer, official, employee or agent of City shall be personally liable to Developer or its successors in interest in the event of any default or breach by City or for any amount which may become due to Developer or its successors in interest pursuant to this Agreement.

12.15 Time of the Essence; Calculation of Time Periods. Time is of the essence for each condition, term, obligation and provision of this Agreement. Unless otherwise specified, in computing any period of time described in this Agreement, the day of the act or event after which the designated period of time begins to run is not to be included and the last day of the period so computed is to be included, unless such last day is not a business day, in which event the period shall run until the next business day. The final day of any such period shall be deemed to end at 5:00 p.m., local time at the Property. For purposes of this Agreement, a "business day" means a day that is not a Saturday, Sunday, a federal holiday or a state holiday under the laws of California.

12.16 Governing Law; Venue. This Agreement shall be governed by and construed in accordance with the laws of the State of California without regard to principles of conflicts of laws. Any action to enforce or interpret this Agreement shall be filed in the Superior Court of Alameda County, California or in the Federal District Court for the Northern District of California.

SIGNATURES ON FOLLOWING PAGE.

IN WITNESS WHEREOF, the Parties have entered into this Agreement effective as of the date first written above.

DEVELOPER:

ALLIED 39802 CEDAR, LLC,
a California limited liability company

By: Allied Housing, Inc., a California nonprofit public benefit corporation, its sole member and manager

By:_____

Its:_____

CITY:

CITY OF NEWARK,
a California municipal corporation

By: _____
David Benoun, City Manager

ATTEST:

By: _____
Sheila Harrington, City Clerk

APPROVED AS TO FORM:

By: _____
Kristopher Kokotaylo, City Attorney

EXHIBIT A

LEGAL DESCRIPTION

EXHIBIT B

SCOPE OF DEVELOPMENT

EXHIBIT C

SCHEDULE OF PERFORMANCE

EXHIBIT D

FINANCING PLAN

EXHIBIT E

CERTIFICATE OF COMPLETION

EXHIBIT F

FORM OF NOTE

EXHIBIT G

FORM OF DEED OF TRUST

EXHIBIT H

FORM OF REGULATORY AGREEMENT

EXHIBIT I

CITY INSURANCE REQUIREMENTS

5161821.2

Attachment B Exhibit 2

Recording requested by and when recorded mail to: City of Newark 37101 Newark Blvd. Newark, CA 94560 Attn: Community Development Director **EXEMPT FROM RECORDING FEES PER GOVERNMENT CODE §§6103, 27383**	
APN:	Space above this line for Recorder's use.

AFFORDABLE HOUSING REGULATORY AGREEMENT

AND

DECLARATION OF RESTRICTIVE COVENANTS

THE CITY OF NEWARK,
a California municipal corporation

and

ALLIED 39802 CEDAR, LLC,
a California limited liability company

(Cedar Community Apartments)

Dated _____, 2022

AFFORDABLE HOUSING REGULATORY AGREEMENT
AND DECLARATION OF RESTRICTIVE COVENANTS
(Cedar Community Apartments)

This Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants (this "**Agreement**") is entered into effective as of _____, 2022 (the "**Effective Date**") by and between the City of Newark, a California municipal corporation (the "**City**"), and Allied 39802 Cedar, LLC, a California limited liability company ("**Owner**"). City and Owner are hereinafter collectively referred to as the "**Parties**."

RECITALS

A. Owner owns that certain real property located at 39802 Cedar Boulevard, Newark, California, known as Cedar Community Apartments (the "**Property**"), as more particularly described on Exhibit A attached hereto and incorporated herein by this reference.

B. Owner intends to convert the Property into a one hundred twenty-five (125) unit affordable multifamily supportive housing development for chronically homeless persons and persons at risk of homelessness, consisting of fifty-seven (57) studio units, thirty-eight (38) one-bedroom units, and thirty (30) two-bedroom units (the "**Project**").

C. Owner and City have jointly applied for and have received approval of a Homekey grant from the State of California in the amount of Thirty-Eight Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($38,156,293.00) (the "**Homekey Grant**") to finance the Project. Developer and City have entered into a Standard Agreement with the California Department of Housing and Community Development, dated as of _____, 2022, which sets forth the requirements imposed in connection with the Homekey Grant (the "**Project Homekey Agreement**").

D. City and Owner previously entered into that certain Loan Agreement dated concurrently herewith pursuant to which the City provided Owner with a loan of Thirty-Eight Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($38,156,293.00) from the Project Homekey grant received by the City, plus an additional Six Million Dollars ($6,000,000) in funds from the City's Housing Impact Fee Fund and American Rescue Plan Act (ARPA) Recovery Fund (the "Loan Agreement"). The Loan Agreement is evidenced by a Secured Promissory Note (the "**Note**) executed by Owner and dated as of the date hereof, and is secured by a Deed of Trust, Assignment of Rents, Security Agreement and Fixture Filing (the "**Deed of Trust**") dated as of the date hereof and executed by Owner for the benefit of City. The Deed of Trust will be recorded in the Official Records of Alameda County substantially concurrently herewith.

E. Pursuant to the Loan Agreement and the Project Homekey Agreement, the Owner has agreed to restrict one hundred twenty-four (124) of the units in the Project as affordable to and occupied by or available for occupancy by extremely low income households for a period of not less than fifty-five (55) years (the "**Restricted Units**").

F. The Parties have agreed to enter into and record this Agreement in order to satisfy the conditions described in the foregoing Recitals. The purpose of this Agreement is to regulate and restrict the occupancy and rents of the Project's Restricted Units for the benefit of the Project occupants and the City. The covenants in this Agreement are intended to run with the land and be binding on Owner and Owner's successors and assigns for the full term of this Agreement.

NOW THEREFORE, in consideration of the foregoing, and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby agree as follows:

1. Definitions. The following terms have the meanings set forth in this Section wherever used in this Agreement or the attached exhibits.

1.1 "**Actual Household Size**" shall mean the actual number of persons in the applicable household.

1.2 "**Area Median Income**" or "**AMI**" means the area median income for Alameda County, California, adjusted for Actual Household Size, determined periodically by the California Department of Housing and Community Project **("HCD"**) as published in Section 6932 of Title 25 of the California Code of Regulations **("Regulations"**) or successor provision published pursuant to California Health and Safety Code Section 50093(c). If HCD ceases to make such determination, Area Median Income shall be the median income applicable to Alameda County, with adjustments for Actual Household Size, as determined from time to time by the U.S. Department of Housing and Urban Project **("HUD"**) pursuant to the United States Housing Act of 1937 as amended, or such other method of median income calculation applicable to the City of Newark that HUD may hereafter adopt in connection with such Act.

1.3 "**Assumed Household Size**" means the household size "adjusted for family size appropriate to the unit" in accordance with California Health and Safety Code Section 50053.

1.4 "**At Risk of Homelessness**" is defined in Title 24 CFR Part 578.3.

1.5 "**City**" means the City of Newark, a California municipal corporation.

1.6 "**Controlled Affiliate**" is defined in Section 8.2.

1.7 **"Deed of Trust"** is defined in Recital D.

1.8 "**Eligible Household**" means a household for which total household income upon initial occupancy does not exceed the maximum income level for a Restricted Unit as specified in Sections 2.1 and 2.2, and is either Homeless or At Risk of Homelessness.

1.9 "**Extremely-Low Income Household**" shall mean a household, with a Household Income which does not exceed the extremely low income limits applicable to

Alameda County, as published and periodically updated by the California Department of Housing and Community Development pursuant to Section 50106 of the California Health and Safety Code.

1.10 "**Extremely-Low Income Unit**" mean the Units which pursuant to Section 2.1 below, are required to be occupied by Extremely-Low Income Households.

1.11 "**Homekey Grant**" is defined in Recital B hereof.

1.12 "**Homeless**" is defined in Title 24 CFR Part 578.3.

1.13 "**Household Income**" shall mean the total anticipated annual income of all persons in a household, as calculated in accordance with in 25 California Code of Regulations Section 6914, or pursuant to a successor State housing program that utilizes a reasonably similar method of calculation of adjusted income.

1.14 "**Indemnified Parties**" is defined in Section 10.1.

1.15 **"Note"** is defined in Recital D.

1.16 "**Owner"** means Allied 39802 Cedar, LLC, a California limited liability company, and its successors and assigns.

1.17 "**Project**" shall mean the Property and the one hundred twenty-five (125) units to be developed on the Property, and any additional improvements and all landscaping, roads and parking spaces existing thereon, as the same may from time to time exist.

1.18 "**Project Homekey Agreement**" is defined in Recital C hereof.

1.19 "**Property**" is defined in Recital A.

1.20 "**Qualifying Rent**" means a monthly rent which does not exceed the amounts set forth in Section 2.1 below.

1.21 "**Rent-Restricted**" means a dwelling unit for which the gross rent charged for such unit does not exceed the Qualifying Rent, as adjusted for Assumed Household Size in accordance with the HCD Regulations and guidelines.

1.22 "**Rent**" shall mean the total of monthly payments by the tenants of a Unit for the following: use and occupancy of the Unit and land and associated facilities, including parking; any separately charged fees or service charges assessed by Owner which are required of all tenants, other than security deposits; the cost of an adequate level of service for utilities paid by the tenant, including garbage collection, sewer, water, electricity, gas and other heating, cooking and refrigeration fuel, but not cable or telephone service; any other interest, taxes, fees or charges for use of the land or associated facilities and assessed by a public or private entity other than Owner, and paid by the Tenant. Utility allowances may

be determined by use of the utility allowance published by the Alameda County Housing Authority, or if no such allowance is published, by a similar public agency approved by the City.

1.23 "**Restricted Unit**" means a dwelling unit which is reserved for occupancy at a Qualifying Rent by an Extremely Low-Income Eligible Household in accordance with and as set forth in Sections 2.1 and 2.2.

1.24 "**Tenant**" shall mean a household occupying a Restricted Unit.

1.25 "**Term**" means the term of this Regulatory Agreement, which commences as of the Effective Date and shall terminate on the fifty-fifth (55th) anniversary of the City's issuance of the certificate of completion for the Project in accordance with the Loan Agreement.

1.26 "**Transfer**" is defined in Section 8.1.

2. Use and Affordability Restrictions. Owner hereby covenants and agrees, for itself and its successors and assigns, that the Property shall be shall be used solely for the conversion and operation of the Project subject to the occupancy and affordability restrictions set forth herein for the Term of this Agreement. Owner represents and warrants that it has not entered into any agreement that would restrict or compromise its ability to comply with the occupancy and affordability restrictions set forth in this Agreement, and Owner covenants that it shall not enter into any agreement that is inconsistent with such restrictions without the express written consent of City.

2.1 Occupancy Requirements.

For a term of fifty-five (55) years commencing upon the date of issuance of a final certificate of occupancy for the Project, no fewer than one hundred twenty-four (124) dwelling units in the Project shall be both Rent-Restricted and occupied (or if vacant, available for occupancy) by Eligible Households. The size and mix of the Restricted Units are set forth in Exhibit B.

2.1.1 Homeless or At Risk of Homelessness. Each of the residents of the Extremely Low Income Units shall be Homeless or At Risk of Homelessness, in such numbers as required by the Project Homekey Agreement.

2.1.2 Manager's Unit. One (1) Unit shall be reserved for an on-site manager and shall not be subject to affordability or occupancy restrictions set forth herein.

2.2 Qualifying Rent for Restricted Units.

2.2.1 Extremely Low Income Unit Rent. Subject to the provisions of Section 2.3 below, the Rent charged to Tenants of the Extremely Low Income Units shall not exceed one-twelfth (1/12th) of thirty percent (30%) of thirty percent (30%) of Area Median Income, adjusted for Assumed Household Size.

2.3 Increased Income of Occupying Households.

2.3.1 Non-Qualifying Household. If, upon recertification of a Tenant's income, the Owner determines that a Tenant has an Adjusted Income exceeding the qualifying income for Extremely Low Income Household, adjusted for Actual Household Size, such Tenant shall be permitted to continue to occupy the Unit at a Rent not exceeding one-twelfth of thirty percent (30%) of the Tenant's actual household income. **[Discuss time limits for over-income tenants]**

2.3.2 Continued Compliance. In the event an occupant household's income increases and the rent is increased as set forth in Section 2.3.1 above, the Restricted Unit shall continue to be classified as an Extremely Low Income Unit until such time as the Unit is vacated by the occupant.

2.4 Priority. In renting Restricted Units to Persons at Risk of Homelessness, Owner shall give first priority to Eligible Households in which at least one member lives or works in the City of Newark, unless compliance with the foregoing criteria is prohibited by law or by the County financing or by other state or federal sources of financing for the Project. If such priority is prohibited by County or other financing, Owner shall cooperate with City in seeking and applying for applicable approvals for such priority. Upon obtaining applicable approval for such priority, Owner shall make such modifications to the Marketing and Management Plan as are necessary to implement such priority.

2.5 No Condominium Conversion. Owner shall not convert the Project to condominium or cooperative ownership or sell condominium or cooperative rights to the Project during the term of this Agreement.

2.6 Non-Discrimination; Compliance with Fair Housing Laws.

2.6.1 Fair Housing. Owner shall comply with state and federal fair housing laws in the marketing and rental of the units in the Project. Owner shall accept as tenants, on the same basis as all other prospective tenants, persons who are recipients of federal certificates or vouchers for rent subsidies pursuant to the existing Section 8 program or any successor thereto.

2.6.2 Non-Discrimination. The Owner covenants by and for itself and any successors in interest that there shall be no discrimination against or segregation of any person or group of persons, on account of any basis listed in subdivision (a) or (d) of Section 12955 of the Government Code, as those bases are defined in Sections 12926, 12926.1, subdivision (m) and paragraph (1) of subdivision (p) of Section 12955, and Section 12955.2 of the Government Code, in the leasing, subleasing, transferring, use, occupancy, tenure, or enjoyment of the Property and the Project, nor shall the Owner itself or any person claiming under or through it establish or

permit any such practice or practices of discrimination or segregation with reference to the selection, location, number, use or occupancy of tenants, lessees, subtenants, sublessees or vendees of the Property. The foregoing covenants shall run with the land.

2.6.3 Section 8 Certificate Holders. Owner shall accept as tenants, on the same basis as all other prospective tenants, persons who are recipients of federal certificates for rent subsidies pursuant to the existing housing program under Section 8 of the United States Housing Act, or its successor, or similar programs. Owner shall not apply selection criteria to holders of Section 8 certificate or similar certificates or vouchers that is more burdensome than criteria applied to all other prospective tenants, nor shall Owner apply or permit the application of management policies or lease provisions with respect to the Project which have the effect of precluding occupancy of units by such prospective tenants.

2.7 Loss of Subsidy. In the event the Section 8 subsidy ("PBV") to the Project has not been renewed and/or is terminated, and the Owner, after a diligent effort, has been unable to obtain a substitute subsidy in a comparable amount, Owner may propose that rents for any rent-restricted units losing such PBV can be increased to 30% x 60% of Area Median Income, adjusted for Assumed Household Size, and that maximum incomes for residents of such units be increased to 60% of Area Median Income, subject to the reasonable approval of the City and the written consent of the California Department of Housing and Community Development. City shall meet and confer in good faith with Owner regarding such proposed change in maximum rents and incomes, and the Parties shall execute and record such changes to the Project Homekey Agreement and this Agreement as necessary to implement such changes.

2.8 Compliance with Project Homekey Agreement. The Parties agree that, regardless of whether the City is jointly or solely responsible for performance of the requirements of the Project Homekey Agreement under the terms of that agreement, the Owner shall perform all of the requirements of the Grantee under the Project Homekey Agreement, and City shall not be responsible for performance of such obligations. Such requirements to be performed by the Owner shall include, without limitation, compliance with maximum income and rent requirements, meeting all program deadlines, compliance with all rent standards, use in accordance with eligible uses, compliance with all performance milestones, preparation and submission of all required reporting, compliance with all conditions of disbursement of the Homekey Grant, compliance with prevailing wage laws, liability for environmental requirements, insurance requirements, relocation requirements, and adaptability and accessibility requirements, submission and compliance with the property management plan, supportive services plan and affirmative fair housing marketing plan, compliance with fair housing requirements, and compliance with record retention, inspection and audit requirements.

3. Income Certification & Reporting

3.1 Reporting Requirements.

3.1.1 Tenant Certification. Owner or Owner's authorized agent shall obtain from each household prior to initial occupancy of each Restricted Unit, and on every anniversary thereafter, a written certificate containing all of the following in such format and with such supporting documentation as City may reasonably require:

(a) The identity and age of each member of the household; and

(b) Total household income.

3.1.2 The Owner shall make a good faith effort to verify that the income provided by an applicant or occupying household in an income certification is accurate by taking one or more of the following steps as a part of the verification process: (1) obtain a pay stub for the most recent pay period; (2) obtain an income tax return for the most recent tax year; (3) conduct a credit agency or similar search; (4) obtain an income verification form from the applicant's current employer; (5) obtain an income verification form from the Social Security Administration and/or the California Department of Social Services if the applicant receives assistance from either of such agencies; or (6) if the applicant is unemployed and has no such tax return, obtain another form of independent verification.

3.1.3 Owner shall retain such certificates for not less than three (3) years, and upon City's request, shall make the originals available for inspection by City and shall provide copies of such certificates to City.

3.2 Annual Report; Inspections. Owner shall submit an annual report ("Annual Report") to the City in form satisfactory to City, together with a certification that the Project is in compliance with the requirements of this Agreement.

3.2.1 Owner shall submit to the City such Annual Report:

(a) Not later than the ninetieth (90th) day after the close of each fiscal year of the City; or such other date as may be requested by City; and

(b) Within fifteen (15) days after receipt of a written request, any other information or completed forms requested by City in order to comply with reporting requirements of the State of California.

3.2.2 The Annual Report shall, at a minimum, include the following information for each dwelling unit in the Project:

(a) Unit number;

(b) Identification of the Unit as an Extremely Low Income Unit;

(c) Current rent and other charges;

(d) Dates of any vacancies during the previous year;

(e) Number of people residing in the unit;

(f) Total household income of residents;

(g) Documentation of source of household income;

(h) Designation of tenant as Homeless or At Risk of Homelessness as of initial occupancy; and

(i) The information required by Section 3.1.1.

3.2.3 Upon City's request, Owner shall include with the Annual Report, an income recertification for each household, documentation verifying tenant eligibility, and such additional information as City may reasonably request from time to time in order to show compliance with this Agreement. The Annual Report shall conform to the format requested by City; provided however, during such time that the Project is subject to a regulatory agreement restricting occupancy and/or rents pursuant to requirements imposed in connection with the use of federal low-income housing tax credits or tax-exempt financing, Owner may satisfy the requirements of this Section by providing City with a copy of compliance reports required in connection with such financing.

3.3 On-site Inspection. Owner shall permit representatives of City to enter and inspect the Property and the Project during reasonable business hours in order to monitor compliance with this Agreement upon 24-hours advance notice of such visit to Owner or to Owner's management agent.

3.4 Records. The Owner shall maintain complete, accurate and current records pertaining to the Project, and shall permit any duly authorized representative of the City to inspect records, including records pertaining to income and household size of tenants. All tenant lists, applications and waiting lists relating to the Project shall at all times be kept separate and identifiable from any other business of the Owner and shall be maintained as required by the City in a reasonable condition for proper audit and subject to examination during business hours by representatives of the City. The Owner shall retain copies of all materials obtained or produced with respect to occupancy of the Units for a period of at least five (5) years.

4. Term of Agreement.

4.1 Term of Restrictions. This Agreement shall remain in effect through the fifty-fifth (55th) anniversary of the City's issuance of the certificate of completion for the Project in accordance with the Loan Agreement.

4.2 Effectiveness Succeeds Conveyance of Property and Repayment of Loan. This Agreement shall remain effective and fully binding for the full term hereof regardless of any sale, assignment, transfer, or conveyance of the Property or the Project or any part thereof or interest therein.

4.3 Reconveyance. Upon the termination of this Agreement, the Parties agree to execute and record appropriate instruments to release and discharge the terms of this Agreement; provided, however, the execution and recordation of such instruments shall not be necessary or a prerequisite to the termination of this Agreement in accordance with its terms.

4.4 Notice of Expiration of Term. Owner shall comply with the requirements set forth in California Government Code Sections 65863.10 and 65863.11, and any other applicable law existing at the time of expiration of the Term. Such notice requirements include: (i) a twelve (12) month notice to existing tenants, prospective tenants and Affected Public Agencies (as defined in California Government Code Section 65863.10(a)) prior to the expiration of the Term, (ii) a six (6) month notice requirement to existing tenants, prospective tenants and Affected Public Agencies prior to the expiration of the Term; (iii) a notice of an offer to purchase the Project to "qualified entities" (as defined in California Government Code Section 65863.11(d)), if the Project is to be sold within five (5) years of the end of the Term; (iv) a notice of right of first refusal within the one hundred eighty (180) day period that qualified entities may purchase the Project.

5. Binding Upon Successors; Covenants to Run with the Land.

5.1 Owner hereby subjects its interest in the Property and the Project to the covenants and restrictions set forth in this Agreement. The City and Owner hereby declare their express intent that the covenants and restrictions set forth herein shall be deemed covenants running with the land and shall be binding upon and inure to the benefit of the heirs, administrators, executors, successors in interest, transferees, and assigns of Owner and City, regardless of any sale, assignment, conveyance or transfer of the Property, the Project or any part thereof or interest therein. Any successor-in-interest to Owner, including without limitation any purchaser, transferee or lessee of the Property or the Project (other than the tenants of the individual dwelling units within the Project) shall be subject to all of the duties and obligations imposed hereby for the full term of this Agreement. Each and every contract, deed, ground lease or other instrument affecting or conveying the Property or the Project or any part thereof, shall conclusively be held to have been executed, delivered and accepted subject to the covenants, restrictions, duties and obligations set forth herein, regardless of whether such covenants, restrictions, duties and obligations are set forth in such contract, deed, ground lease or other instrument. If any such contract, deed, ground lease or

other instrument has been executed prior to the date hereof, Owner hereby covenants to obtain and deliver to City an instrument in recordable form signed by the parties to such contract, deed, ground lease or other instrument pursuant to which such parties acknowledge and accept this Agreement and agree to be bound hereby.

5.2 Owner agrees for itself and for its successors that in the event that a court of competent jurisdiction determines that the covenants herein do not run with the land, such covenants shall be enforced as equitable servitudes against the Property and the Project in favor of City.

6. Property Management; Repair and Maintenance; Marketing.

6.1 Management Responsibilities. Owner shall be responsible for all management functions with respect to the Property and the Project, including without limitation the selection of tenants, certification and recertification of household income and eligibility, evictions, collection of rents and deposits, maintenance, landscaping, routine and extraordinary repairs, replacement of capital items, and security. Except as City may otherwise agree in writing, City shall have no responsibility for management or maintenance of the Property or the Project.

6.2 Management Entity. Unless managed directly by Owner, the Project shall at all times be managed by an experienced management agent reasonably acceptable to City, with demonstrated ability to operate residential facilities like the Project in a manner that will provide decent, safe, and sanitary housing (as approved, the "Management Agent"). The Owner shall submit for City's approval the identity of any proposed Management Agent. The Owner shall also submit such additional information about the background, experience and financial condition of any proposed Management Agent as is reasonably necessary for the City to determine whether the proposed Management Agent meets the standard for a qualified Management Agent set forth above. If the proposed Management Agent meets the standard for a qualified Management Agent set forth above, City shall approve the proposed Management Agent by notifying the Owner in writing. Unless the proposed Management Agent is disapproved by City within thirty (30) days, which disapproval shall state with reasonable specificity the basis for disapproval, it shall be deemed approved.

6.2.1 Performance Review. City reserves the right to conduct an annual (or more frequently, if deemed reasonably necessary by City) review of the management practices and financial status of the Project. The purpose of each periodic review will be to enable City to determine if the Project is being operated and managed in accordance with the requirements and standards of this Agreement. The Owner shall cooperate with City in such reviews.

6.2.2. Replacement of Management Agent. If, as a result of a periodic review, City determines in its reasonable judgment that the Project is not being

operated and managed in accordance with any of the material requirements and standards of this Agreement, City shall deliver notice to Owner of its intention to cause replacement of the Management Agent, including the reasons therefor. Within fifteen (15) days of receipt by Owner of such written notice, City staff and Owner shall meet in good faith to consider methods for improving the financial and operating status of the Project. If after a reasonable period as determined by City (not to exceed sixty (60) days), City determines that the Owner is not operating and managing the Project in accordance with the material requirements and standards of this Agreement, City may require replacement of the Management Agent.

If, after the above procedure, City requires in writing the replacement of the Management Agent, Owner shall promptly dismiss the then Management Agent, and shall appoint as the Management Agent a person or entity meeting the standards for a Management Agent set forth in above and approved by City.

Any contract for the operation or management of the Project entered into by Owner shall provide that the contract can be terminated as set forth above. Failure to remove the Management Agent in accordance with the provisions of this Section shall constitute default under this Agreement.

6.3 Repair, Maintenance and Security. Throughout the term of this Agreement, Owner shall at its own expense, maintain the Property and the Project in good physical condition, in good repair, and in decent, safe, sanitary, habitable and tenantable living conditions in conformity with all applicable state, federal, and local laws, ordinances, codes, and regulations. Without limiting the foregoing, Owner agrees to maintain the Project and the Property (including without limitation, the residential units, common meeting rooms, common areas, landscaping, driveways and walkways) in a condition free of all waste, nuisance, debris, unmaintained landscaping, graffiti, disrepair, abandoned vehicles/appliances, and illegal activity, and shall take all reasonable steps to prevent the same from occurring on the Property or at the Project. Owner shall prevent and/or rectify any physical deterioration of the Property and the Project and shall make all repairs, renewals and replacements necessary to keep the Property and the improvements located thereon in good condition and repair. Owner shall provide adequate safety and security services for occupants of the Project, including without limitation parking lot and pathway lighting and security cameras. Owner shall conduct a yearly security inspection, employing Crime Prevention Through Environmental Design (CPTED) principles, and illegal activity review with Newark Police Department. Owner shall maintain an on-site contact, available 24 hours per day, to receive complaints and concerns from the community, and Owner shall promptly respond to and address such complaints and concerns. Documents and reports relating to security inspections, community complaints and concerns, and illegal activities on the Property shall be maintained and available for inspection by the City.

6.3.1. Property Maintenance. Owner acknowledges that adequate property maintenance is necessary to protect investments and to ensure that the Property and Project is not allowed to deteriorate due to below-average maintenance. Owner shall make all repairs and replacements necessary to keep the improvements in good condition.

6.3.2 Yard Area. Owner shall not leave any yard areas on the Property unmaintained, including broken or discarded furniture, appliances and other, household equipment stored in yard areas for a period exceeding one (1) week; packing boxes, lumber trash, dirt and other debris in areas visible from public property or neighboring properties; and vehicles parked or stored in other than approved parking areas.

6.3.3 Building. Owner shall not leave any buildings located on the Property in an unmaintained condition so that any of the following exist: violations of state law, uniform codes, or City ordinances; conditions that constitute an unsightly appearance that detracts from the aesthetics or value of the Property or constitutes a private or public nuisance; broken windows; graffiti (must be removed within 72 hours); and, conditions constituting hazards and/or inviting trespassers, or malicious mischief.

6.3.4 Safety and Security. Owner acknowledges that it is a priority of the City to facilitate the security development and the safety of the residents and surrounding community. Owner shall implement and maintain throughout the Term the following security measures in the Project:

a. To the extent feasible, Owner shall employ defensible space design principles and crime prevention measures in the operation of the Project including but not limited to conducting a yearly security inspection, employing Crime Prevention Through Environmental Design (CPTED) principles, and illegal activity review with City of Newark Police Department.

b. Owner shall provide adequate safety and security services for occupants of the Project, including without limitation parking areas and pathway lighting and security cameras.

c. Owner shall use best efforts to work with the City of Newark Police Department to implement and operate an effective neighborhood watch program.

d. Owner shall provide added security including dead-bolt locks for every entry door, and where entry doors are damaged, replace them with solid-core doors.

e. Owner shall maintain an on-site contact, available 24 hours per day, to receive complaints and concerns from the community, and

Owner shall promptly respond to and address such complaints and concerns.

f. The City shall have the right to enter on the Property and/or contact the City of Newark Police Department if it becomes aware of or is notified of any conditions that pose a danger to the peace, health, welfare or safety of the Tenants and/or the surrounding community, and to perform or cause to be performed such acts as are necessary to correct the condition. The City shall provide Owner notice of its contact with the City of Newark Police Department.

g. Documents and reports relating to security inspections, community complaints and concerns, and illegal activities on the Property shall be maintained and available for inspection by the City.

6.3.5 City's Right to Perform Maintenance. In the event that Owner breaches any of the covenants contained in Section 6.3, and such default continues for a period of ten (10) days after written notice from City (with respect to graffiti, debris, and waste material) or thirty (30) days after written notice from City (with respect to landscaping, building improvements and general maintenance), then City, in addition to any other remedy it may have under this Agreement or at law or in equity, shall have the right, but not the obligation, to enter upon the Property and perform all acts and work necessary to protect, maintain, and preserve the improvements and the landscaped areas on the Property.

6.3.6 Costs. All costs expended by City in connection with the foregoing, shall constitute an indebtedness secured by the Deed of Trust, and shall be paid by Owner to City upon demand. All such sums remaining unpaid thirty (30) days following delivery of City's invoice therefor shall bear interest at the rate of 10% per annum.

6.4 Marketing and Management Plan. Owner has submitted to City and City has reviewed and approved a plan for marketing and managing the Property ("Marketing and Management Plan"). The Marketing and Management Plan addresses in detail how Owner plans to market the Restricted Units to prospective Eligible Households in accordance with fair housing laws and this Agreement, Owner's tenant selection criteria, and how Owner plans to certify the eligibility of Eligible Households. The Plan also describes the management team and addresses how the Owner and the management entity plan to manage and maintain the Property and the Project. The Plan includes the proposed management agreement and the form of rental agreement that Owner proposes to enter into with Project tenants. Owner shall abide by the terms of the Marketing and Management Plan in marketing, managing, and maintaining the Property and the Project, and throughout the term of this Agreement, shall submit proposed modifications to City for its review and approval.

6.5 Social Services. Owner shall provide a variety of social services at the Project. Such social services shall be in accordance with the Project Homekey Agreement. Owner shall use its best efforts to create a comprehensive social service program that is targeted to the needs of the residents of the Project which may include, but is not limited to, the following services: service coordination, referrals to community resources, financial literacy, life skills training, individual service plans, benefits enrollment assistance, housing retention and stability support, computer training, educational assistance, recreational and community building activities. Owner shall ensure that all personnel providing or coordinating all social services shall be adequately trained and counseled, including with respect to the appropriate means and methods of communicating and interacting with residents. Any substantive change in the scope, amount, or type of social services to be provided at the Property shall be subject to prior reasonable approval of City and approval shall not be unreasonably withheld.

6.6 Fees, Taxes, and Other Levies. Owner shall be responsible for payment of all fees, assessments, taxes, charges, liens and levies, including without limitation possessory interest taxes, if applicable, imposed by any public authority or utility company with respect to the Property or the Project, and shall pay such charges prior to delinquency. However, Owner shall not be required to pay any such charge so long as: i) Owner is contesting such charge in good faith and by appropriate proceedings, ii) Owner maintains reserves adequate to pay any contested liabilities, and iii) On final determination of the proceeding or contest, Owner immediately pays or discharges any decision or judgment rendered against it, together with all costs, charges and interest.

6.7 Insurance Coverage. Prior to issuance of building permits for the Project, and continuing throughout the term of this Agreement Owner shall comply with the insurance requirements set forth in the Loan Agreement, and shall, at Owner's expense, maintain in full force and effect insurance coverage as specified in the Loan Agreement; provided however, during such time that lenders or low-income housing tax credit investors providing financing for the Project impose insurance requirements that are inconsistent with the requirements set forth in the Loan Agreement, Owner may satisfy the requirements of this Section by meeting the requirements of such lenders or investors. Notwithstanding the foregoing, throughout the term hereof, Owner shall comply with the provisions of the Loan Agreement pertaining to (i) provision to City of proof of insurance for the Project, (ii) naming of City as additional insured, and (iii) provision to City of notice of cancellation or reduction in coverage.

6.8 Property Damage or Destruction. If any part of the Project is damaged or destroyed, Owner shall repair or restore the same, consistent with the occupancy and rent restriction requirements set forth in this Agreement. Such work shall be commenced within 120 days after the damage or loss occurs and shall be completed within one year thereafter, provided that insurance proceeds are available to be applied to such repairs or restoration within such period and the repair or restoration is financially feasible.

7. Recordation; No Subordination. This Agreement shall be recorded in the Official Records of Alameda County. Owner hereby represents, warrants and covenants that with the exception of easements of record, if any, absent the written consent of City, this Agreement shall not be subordinated in priority to any lien (other than those pertaining to taxes or assessments), encumbrance, or other interest in the Property or the Project. If at the time this Agreement is recorded, any interest, lien, or encumbrance has been recorded against the Project in position superior to this Agreement, upon the request of City, Owner hereby covenants and agrees to promptly undertake all action necessary to clear such matter from title or to subordinate such interest to this Agreement consistent with the intent of and in accordance with this Section 7, and to provide such evidence thereof as City may reasonably request.

8. Transfer and Encumbrance.

8.1 Restrictions on Transfer and Encumbrance. During the term of this Agreement, except as permitted pursuant to the Loan Agreement or this Agreement, Owner shall not directly or indirectly, voluntarily, involuntarily or by operation of law make or attempt any total or partial sale, transfer, conveyance, assignment or lease (collectively, "**Transfer"**) of the whole or any part of the Property, the Project, or the Improvements, without the prior written consent of the City.

8.2 Permitted Transfers. The City shall not withhold its consent to the following Transfers: (i) the granting of utility easements or permits to facilitate development of the Property; (ii) the dedication of any property required pursuant to this Agreement; (iii) the lease of individual units to tenants for occupancy as their principal residence in accordance with this Agreement; (iv) assignments creating security interests for the purpose of financing the acquisition, construction or permanent financing of the Project or the Property in accordance with the approved Financing Plan contained in the Loan Agreements, or Transfers directly resulting from the foreclosure of, or granting of a deed in lieu of foreclosure of, such a security interest; and (v) a Transfer to entity which is under the direct control or under common control with Owner or in which Owner is the sole member or the general partner ("**Controlled Affiliate**").

8.3 Encumbrances. Owner agrees to use best efforts to ensure that any deed of trust secured by the Project for the benefit of a lender other than City ("Third-Party Lender") shall contain each of the following provisions:

8.3.1 Third-Party Lender shall use its best efforts to provide to City a copy of any notice of default issued to Owner concurrently with provision of such notice to Owner (provided however, the failure to do so shall not impair such Third-Party Lender's rights and remedies); and

8.3.2 City shall have the reasonable right, but not the obligation, to cure any default by Owner within the same period of time provided to Owner for such cure.

Owner agrees to provide to City a copy of any notice of default Owner receives from any Third-Party Lender within three (3) business days following Owner's receipt thereof.

8.4 Mortgagee Protection. No violation of any provision contained herein shall defeat or render invalid the lien of any mortgage or deed of trust made in good faith and for value upon all or any portion of the Project or the Property, and the purchaser at any trustee's sale or foreclosure sale shall not be liable for any violation of any provision hereof occurring prior to the acquisition of title by such purchaser. Such purchaser shall be bound by and subject to this Agreement from and after such trustee's sale or foreclosure sale. Promptly upon determining that a violation of this Agreement has occurred, City shall give written notice to the holders of record of any mortgages or deeds of trust encumbering the Project or the Property that such violation has occurred.

9. Default and Remedies.

9.1 Events of Default. The occurrence of any one or more of the following events shall constitute an event of default hereunder ("Event of Default"):

(a) The occurrence of a Transfer in violation of this Agreement;

(b) Owner's failure to maintain insurance on the Property and the Project as required hereunder, and the failure of Owner to cure such default within 10 days.

(c) Subject to Owner's right to contest the following charges, Owner's failure to pay taxes or assessments due on the Property or the Project or failure to pay any other charge that may result in a lien on the Property or the Project, and Owner's failure to cure such default within 10 days.

(d) Owner's default in the performance of any term, provision or covenant under this Agreement, and unless such provision specifies a shorter cure period for such default, the continuation of such default for ten (10) days in the event of a monetary default or thirty (30) days in the event of a non-monetary default following the date upon which City shall have given written notice of the default to Owner, or if the nature of any such non-monetary default is such that it cannot be cured within 30 days, Owner's failure to commence to cure the default within thirty (30) days and thereafter prosecute the curing of such default with due diligence and in good faith, but in no event longer than 120 days from receipt of the notice of default.

9.2 Remedies.

9.2.1 If within the applicable cure period, Owner fails to cure a default or fails to commence to cure and diligently pursue completion of a cure, as applicable, or if a cure is not possible, City may proceed with any of the following remedies:

(a) Bring an action for equitable relief seeking the specific performance of the terms and conditions of this Agreement, and/or enjoining, abating, or preventing any violation of such terms and conditions, and/or seeking declaratory relief;

(b) For violations of obligations with respect to rents for Restricted Units, impose as liquidated damages a charge in an amount equal to the actual amount collected in excess of the Qualifying Rent;

(c) Pursue any other remedy allowed at law or in equity, or authorized by the Deed of Trust.

9.2.2 Each of the remedies provided herein is cumulative and not exclusive. The City may exercise from time to time any rights and remedies available to it under applicable law or in equity, in addition to, and not in lieu of, any rights and remedies expressly provided in this Agreement.

10. Indemnification.

10.1 Notwithstanding the insurance coverage required hereunder, Owner shall defend, indemnify and hold the City and its officials, officers, directors, employees, and agents (collectively, the "**Indemnified Parties**") harmless from and against any and all losses, damages, liabilities, claims, demands, judgments, actions, court costs, and legal or other expenses (including reasonable attorneys' fees) which an Indemnified Party may incur as a result of:

10.1.1 Owner's failure to perform any obligation as and when required by this Agreement;

10.1.2 Owner's failure to perform any obligation of the Project Homekey Agreement as and when required by the Project Homekey Agreement;

10.1.3 Any failure of Owner's representations or warranties to be true and complete in all material respects when made; or

10.1.4 Any act or omission by Owner, or any of Owner's contractors, subcontractors, agents, employees, licensees or suppliers with respect to the Project or the Property, except to the extent that such losses are caused by the gross negligence or willful misconduct of such Indemnified Party.

10.2 Owner shall pay immediately upon an Indemnified Party's demand any amounts owing under the indemnity provided under this Section. The duty of Owner to indemnify includes the duty to defend the Indemnified Party in any court action,

administrative action, or other proceeding brought by any third party arising in connection with the Project or the Property with counsel reasonably approved by City. Owner's duty to indemnify the Indemnified Parties shall survive the expiration or earlier termination of this Agreement.

11. Miscellaneous.

11.1 HCD as Third Party Beneficiary. The Department of Housing and Community Development of the State of California is an intended third party beneficiary of this Agreement, and shall have the right, but not the obligation, to enforce any portion of this Agreement.

11.2 Amendments. This Agreement may be amended or modified only by a written instrument signed by both Parties.

11.3 No Waiver. Any waiver by City of any term or provision of this Agreement must be in writing. No waiver shall be implied from any delay or failure by City to take action on any breach or default hereunder or to pursue any remedy allowed under this Agreement or applicable law. No failure or delay by City at any time to require strict performance by Owner of any provision of this Agreement or to exercise any election contained herein or any right, power or remedy hereunder shall be construed as a waiver of any other provision or any succeeding breach of the same or any other provision hereof or a relinquishment for the future of such election.

11.4 Notices. Except as otherwise specified herein, all notices to be sent pursuant to this Agreement shall be made in writing, and sent to the Parties at their respective addresses specified below or to such other address as a Party may designate by written notice delivered to the other parties in accordance with this Section. All such notices shall be sent by: i) Personal delivery, in which case notice is effective upon delivery; ii) Certified or registered mail, return receipt requested, in which case notice shall be deemed delivered upon receipt if delivery is confirmed by a return receipt; iii) Nationally recognized overnight courier, in which case notice is effective on delivery if delivery is confirmed by the delivery service; iv) such other method as mutually agreed by the Parties in writing.

11.4.1 All such notices shall be sent to:

City: City of Newark
37101 Newark Blvd.
Newark, CA 94560
Attn: Community Development Director

Owner: Allied 39802 Cedar, LLC
c/o Allied Housing, Inc.
40849 Fremont Blvd.
Fremont, CA 94538

11.5 Further Assurances. The Parties shall execute, acknowledge and deliver to the other such other documents and instruments, and take such other actions, as either shall reasonably request as may be necessary to carry out the intent of this Agreement.

11.6 Parties Not Co-Venturers. Nothing in this Agreement is intended to or shall establish the Parties as partners, co-venturers, or principal and agent with one another.

11.7 Action by the City. Except as may be otherwise specifically provided herein, whenever any approval, notice, direction, consent or request by the City is required or permitted under this Agreement, such action shall be in writing, and such action may be given, made or taken by the City Manager or designee, without further approval by the City Council.

11.8 Non-Liability of City Officials, Employees and Agents. No member, official, employee or agent of the City shall be personally liable to Owner or any successor in interest, in the event of any default or breach by the City, or for any amount of money which may become due to Owner or its successor or for any obligation of City under this Agreement.

11.9 Headings; Construction. The headings of the sections and paragraphs of this Agreement are for convenience only and shall not be used to interpret this Agreement. The language of this Agreement shall be construed as a whole according to its fair meaning and not strictly for or against any Party.

11.10 Time is of the Essence. Time is of the essence in the performance of this Agreement.

11.11 Governing Law. This Agreement shall be construed in accordance with the laws of the State of California without regard to principles of conflicts of law.

11.12 Attorneys' Fees and Costs. If any legal or administrative action is brought to interpret or enforce the terms of this Agreement, the prevailing party shall be entitled to recover all reasonable attorneys' fees and costs incurred in such action.

11.13 Severability. If any provision of this Agreement is held invalid, illegal, or unenforceable by a court of competent jurisdiction, the validity, legality, and enforceability of the remaining provisions shall not be affected or impaired thereby.

11.14 Entire Agreement; Exhibits. This Agreement, together with the City Documents contains the entire agreement of Parties with respect to the subject matter hereof, and supersedes all prior oral or written agreements between the Parties with respect thereto.

11.15 Counterparts. This Agreement may be executed in multiple counterparts, each of which shall be an original and all of which together shall constitute one agreement.

IN WITNESS WHEREOF, the Parties have executed this Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants as of the date first written above.

CITY OF NEWARK
a California charter city

By:_____
City Manager

ALLIED 39802 CEDAR, LLC
a California limited liability company

By: Allied Housing, Inc., a California nonprofit public benefit corporation, its sole member and manager

By: _____
Title: _____

ATTEST:

By: _____
City Clerk

APPROVED AS TO FORM:

By: _____
City Attorney

SIGNATURES MUST BE NOTARIZED.

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
)
COUNTY OF _____)

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify UNDER PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Name: _____
Notary Public

Exhibit A

LEGAL DESCRIPTION

(Attach legal description of Property.)

Exhibit B

Unit Mix Restrictions

The units in the Project shall be occupied by (or if vacant available for occupancy by) in accordance with the chart below and the requirements of Section 2 of the Agreement.

Unit Type	Extremely Low Income Unit	Very Low Income Unit	Low Income Unit	Manager's Unit	**Total**
Studio	**57**				**57**
One Bedroom	**38**				**38**
Two Bedroom	**29**			**1**	**30**
Total	**124**			**1**	**125**

5161835.3

Attachment B, Exhibit 3

Recording requested by and when recorded mail to:

City of Newark
37101 Newark Boulevard
Newark, CA 94560
Attn: City Clerk

EXEMPT FROM RECORDING FEES PER GOVERNMENT CODE §§6103, 27383

Space above this line for Recorder's use.

DEED OF TRUST, ASSIGNMENT OF RENTS, SECURITY AGREEMENT AND FIXTURE FILING (Cedar Community Apartments)

THIS DEED OF TRUST, ASSIGNMENT OF RENTS, SECURITY AGREEMENT AND FIXTURE FILING (this "**Deed of Trust**") is made as of _____, 2022, by ALLIED 39802 CEDAR, LLC, a California limited liability company ("**Trustor**"), to Chicago Title Insurance Company as trustee ("**Trustee**"), for the benefit of the City of Newark, a California municipal corporation ("**Beneficiary**").

RECITALS

A. Trustor owns fee simple title to the land described in Exhibit A attached hereto and incorporated herein by this reference (the "**Property**"). Trustor intends to convert the improvements on the Property into a 125 unit multifamily residential apartment complex on the Property and related improvements (the "**Project"**).

B. Beneficiary and Trustor have entered into a Loan Agreement dated as of _____, 2022 (the "**Loan Agreement**"), pursuant to which Beneficiary will provide a loan to Trustor in the amount of Forty-Four Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($44,156,293.00) ("**Loan**") for the purpose of financing the Project. Trustor has issued to Beneficiary a secured promissory note dated as of the date hereof (the "**Note**") to evidence Trustor's obligation to repay the Loan. This Deed of Trust, the Loan Agreement, the Note and the Regulatory Agreement (defined below) are collectively referred to herein as the "**City Documents**."

C. As a condition precedent to the making of the Loan, Beneficiary has required that Trustor enter into this Deed of Trust and grant to Trustee for the benefit of Beneficiary, a lien and security interest in the Project and in Trustor's fee simple interest in the Property to secure repayment of the Note and performance of Trustor's obligations under the Loan Agreement and the other City Documents.

NOW THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is agreed as follows.

1. Grant in Trust. In consideration of the foregoing and for the purpose of securing payment and performance of the Secured Obligations defined and described in Section 2, Trustor hereby irrevocably and unconditionally grants, conveys, transfers and assigns to Trustee, in trust for the benefit of Beneficiary, with power of sale and right of entry and possession, all estate, right, title and interest which Trustor now has or may later acquire in and to the Property, and all of the following, whether presently owned or hereafter acquired:

a. All buildings, structures, and improvements, now or hereafter located or constructed on the Property ("**Improvements**");

b. All appurtenances, easements, rights of way, pipes, transmission lines or wires and other rights used in connection with the Property or the Improvements or as a means of access thereto, whether now or hereafter owned or constructed or placed upon or in the Property or Improvements and all existing and future privileges, rights, franchises and tenements of the Property, including all minerals, oil, gas and other commercially valuable substances which may be in, under or produced from any part of the Property, and all water rights, rights of way, gores or strips of land, and any land lying in the streets, ways, and alleys, open or proposed, in front of or adjoining the Property and Improvements (collectively, "**Appurtenances**");

c. All machinery, equipment, fixtures, goods and other personal property of the Trustor, whether moveable or not, now owned or hereafter acquired by the Trustor and now or hereafter located at or used in connection with the Property, the Improvements or Appurtenances, and all improvements, restorations, replacements, repairs, additions or substitutions thereto (collectively, "**Equipment**");

d. All existing and future leases, subleases, licenses, and other agreements relating to the use or occupancy of all or any portion of the Property or Improvements (collectively, "**Leases**"), all amendments, extensions, renewals or modifications thereof, and all rent, royalties, or other payments which may now or hereafter accrue or otherwise become payable thereunder to or for the benefit of Trustor, including but not limited to security deposits (collectively, "**Rents**");

e. All insurance proceeds and any other proceeds from the Property, Improvements, Appurtenances, Equipment, Leases, and Rents, including without limitation, all deposits made with or other security deposits given to utility companies, all claims or demands relating to insurance awards which the Trustor now has or may hereafter acquire, including all advance payments of insurance premiums made by Trustor, and all condemnation awards or payments now or later made in connection with any condemnation or eminent domain proceeding ("**Proceeds**");

f. All revenues, income, rents, royalties, payments and profits produced by the Property, Improvements, Appurtenances and Equipment, whether now owned or hereafter acquired by Trustor ("**Gross Revenues**");

g. All architectural, structural and mechanical plans, specifications, design

documents and studies produced in connection with development of the Property and construction of the Improvements (collectively, "**Plans**"); and

h. All interests and rights in any private or governmental grants, subsidies, loans or other financing provided in connection with development of the Property and construction of the Improvements (collectively, "**Financing**").

All of the above-referenced interests of Trustor in the Property, Improvements, Appurtenances, Equipment, Leases, Rents, Proceeds, Gross Revenues, Plans and Financing as hereby conveyed to Trustee or made subject to the security interest herein described are collectively referred to herein as the "**Property**."

2. Obligations Secured. This Deed of Trust is given for the purpose of securing payment and performance of the following (collectively, the "**Secured Obligations**"): (i) all present and future indebtedness evidenced by the Note and any amendment thereof, including principal, interest and all other amounts payable under the terms of the Note; (ii) all present and future obligations of Trustor to Beneficiary under the Loan Agreement, the Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants dated as of the date hereof, executed by and between City and Trustor and recorded substantially concurrently herewith (the "**Regulatory Agreement**") or the other City Documents; (iii) all additional present and future obligations of Trustor to Beneficiary under any other agreement or instrument acknowledged by Trustor (whether existing now or in the future) which states that it is or such obligations are, secured by this Deed of Trust; (iv) all obligations of Trustor to Beneficiary under all modifications, supplements, amendments, renewals, or extensions of any of the foregoing, whether evidenced by new or additional documents; and (v) reimbursement of all amounts advanced by or on behalf of Beneficiary to protect Beneficiary's interests under this Deed of Trust or any other City Document as such may be modified, supplemented, amended, renewed or extended.

3. Assignment of Rents, Issues, and Profits. Trustor hereby irrevocably, absolutely, presently and unconditionally assigns to Beneficiary the Rents, royalties, issues, profits, revenue, income and proceeds of the Property. This is an absolute assignment and not an assignment for security only. Beneficiary hereby confers upon Trustor a license to collect and retain such Rents, royalties, issues, profits, revenue, income and proceeds as they become due and payable prior to any Event of Default hereunder. Upon the occurrence of any such Event of Default, Beneficiary may terminate such license without notice to or demand upon Trustor and without regard to the adequacy of any security for the indebtedness hereby secured, and may either in person, by agent, or by a receiver to be appointed by a court, enter upon and take possession of the Property or any part thereof, and sue for or otherwise collect such rents, issues, and profits, including those past due and unpaid, and apply the same, less costs and expenses of operation and collection, including reasonable attorneys' fees, to any indebtedness secured hereby, and in such order as Beneficiary may determine. Beneficiary's right to the rents, royalties, issues, profits, revenue, income and proceeds of the Property does not depend upon whether or not Beneficiary takes possession of the Property. The entering upon and taking possession of the Property, the collection of such rents, issues, and profits, and the application thereof as aforesaid, shall not cure or waive any default or notice of default hereunder or invalidate any act done pursuant to such notice. If an Event of Default occurs while Beneficiary is in possession of all or part of the

Property and/or is collecting and applying Rents as permitted under this Deed of Trust, Beneficiary, Trustee and any receiver shall nevertheless be entitled to exercise and invoke every right and remedy afforded any of them under this Deed of Trust and at law or in equity, including the right to exercise the power of sale granted hereunder. Regardless of whether or not Beneficiary, in person or by agent, takes actual possession of the Property or the Improvements, Beneficiary shall not be deemed to be a "mortgagee in possession," shall not be responsible for performing any obligation of Trustor under any Lease, shall not be liable in any manner for the Property, or the use, occupancy, enjoyment or operation of any part of it, and shall not be responsible for any waste committed by Trustor, lessees or any third parties, or for dangerous or defective condition of the Property or any negligence in the management, repair or control of the Property. Absent Beneficiary's written consent, Trustor shall not accept prepayment of Rents for any rental period exceeding one month.

4. Security Agreement. The parties intend for this Deed of Trust to create a lien on the Property, and an absolute assignment of the Rents and Leases, all in favor of Beneficiary. The parties acknowledge that some of the Property may be determined under applicable law to be personal property or fixtures. To the extent that any Property may be or be determined to be personal property, Trustor as debtor hereby grants to Beneficiary as secured party a security interest in all such Property to secure payment and performance of the Secured Obligations. This Deed of Trust constitutes a security agreement under the California Uniform Commercial Code, as amended or recodified from time to time (the "**UCC**"), covering all such Property. To the extent such Property is not real property encumbered by the lien granted above, and is not absolutely assigned by the assignment set forth above, it is the intention of the parties that such Property shall constitute "proceeds, products, offspring, rents, or profits" (as defined in and for the purposes of Section 552(b) of the United States Bankruptcy Code, as such section may be modified or supplemented) of the Property and Improvements.

5. Financing Statements. Pursuant to the UCC, Trustor, as debtor, hereby authorizes Beneficiary, as secured party, to file such financing statements and amendments thereof and such continuation statements with respect thereto as Beneficiary may deem appropriate to perfect and preserve Beneficiary's security interest in the Property and Rents, without requiring any signature or further authorization by Trustor. If requested by Beneficiary, Trustor shall pay all fees and costs that Beneficiary may incur in filing such documents in public offices and in obtaining such record searches as Beneficiary may reasonably require. If any financing statement or other document is filed in the records normally pertaining to personal property, that filing shall not be construed as in any way derogating from or impairing this Deed of Trust or the rights or obligations of the parties under it.

Everything used in connection with the Property and/or adapted for use therein and/or which is described or reflected in this Deed of Trust is, and at all times and for all purposes and in all proceedings both legal or equitable shall be regarded as part of the estate encumbered by this Deed of Trust irrespective of whether (i) any such item is physically attached to the Improvements, (ii) serial numbers are used for the better identification of certain equipment items capable of being thus identified in a recital contained herein or in any list filed with Beneficiary, or (iii) any such item is referred to or reflected in any such financing statement so filed at any time. Similarly, the mention in any such financing statement of (1) rights in or to the proceeds of any fire and/or hazard insurance policy, or (2) any award in eminent domain

proceedings for a taking or for lessening of value, or (3) Trustor's interest as lessor in any present or future lease or rights to income growing out of the use and/or occupancy of the property conveyed hereby, whether pursuant to lease or otherwise, shall not be construed as in any way altering any of the rights of Beneficiary as determined by this instrument or impugning the priority of Beneficiary's lien granted hereby or by any other recorded document. Such mention in any financing statement is declared to be solely for the protection of Beneficiary in the event any court or judge shall at any time hold, with respect to the matters set forth in the foregoing clauses (1), (2), and (3), that notice of Beneficiary's priority of interest is required in order to be effective against a particular class of persons, including but not limited to the federal government and any subdivisions or entity of the federal government.

6. Fixture Filing. This Deed of Trust is intended to be and constitutes a fixture filing pursuant to the provisions of the UCC with respect to all of the Property constituting fixtures, is being recorded as a fixture financing statement and filing under the UCC, and covers property, goods and equipment which are or are to become fixtures related to the Property and the Improvements. Trustor covenants and agrees that this Deed of Trust is to be filed in the real estate records of Alameda County and shall also operate from the date of such filing as a fixture filing in accordance with Section 9502 and other applicable provisions of the UCC. This Deed of Trust shall also be effective as a financing statement covering minerals or the like (including oil and gas) and accounts subject to the UCC, as amended. Trustor shall be deemed to be the "debtor" and Beneficiary shall be deemed to be the "secured party" for all purposes under the UCC.

7. Trustor's Representations, Warranties and Covenants; Rights and Duties of the Parties.

7.1 Representations and Warranties. Trustor represents and warrants that: (i) Trustor lawfully possesses and holds a fee simple interest in the Property and the Improvements, (ii) Trustor has good and marketable title to all of the Property; (iii) Trustor has the full and unlimited power, right and authority to encumber the Property and assign the Rents; (iv) subject only to encumbrances of record and senior liens permitted pursuant to the City Documents or otherwise approved in writing by Beneficiary ("**Permitted Encumbrances**"), this Deed of Trust creates a valid first lien on Trustor's entire interest in the Property; (v) except with respect to Permitted Encumbrances, Trustor owns the Property free and clear of any deeds of trust, mortgages, security agreements, reservations of title or conditional sales contracts, (vi) there is no financing statement affecting the Property on file in any public office other than as disclosed in writing to Beneficiary; and (vii) the correct address of Trustor's chief executive office is specified in Section 10.2.

Trustor further represents and warrants that this Deed of Trust and all other documents delivered or to be delivered by Trustor in connection herewith: (a) have been duly authorized, executed, and delivered by Trustor; (b) are binding obligations of Trustor; and (c) do not violate the provisions of any agreement to which Trustor is a party or which affects the Property. Trustor further represents and warrants that there are no pending, or to Trustor's knowledge, threatened actions or proceedings before any court or administrative agency which may adversely affect Trustor's ownership of the Property.

7.2 Payment and Performance of Secured Obligations. Trustor shall promptly pay

when due the principal and any interest due on the indebtedness evidenced by the Note, and shall promptly pay and perform all other obligations of Trustor arising in connection with the Secured Obligations or the City Documents in accordance with the respective terms thereof.

7.3 Use of Loan Proceeds; Preservation and Maintenance of Property; Compliance with Laws. Trustor covenants that it shall use the proceeds of the Loan (the "**Loan Proceeds**") solely for purposes authorized by the City Documents. Trustor shall keep the Property and Improvements in good repair and condition, and from time to time shall make necessary repairs, renewals and replacements thereto so that the Property shall be preserved and maintained. Trustor covenants to comply with all federal, state and local laws, regulations, ordinances and rules applicable to the Property and the Project, including without limitation all applicable requirements of state and local building codes and regulations, and all applicable statutes and regulations relating to accessibility for the disabled. Trustor shall not remove, demolish or materially alter any Improvement without Beneficiary's consent, shall complete or restore promptly and in good and workmanlike manner any building, fixture or other improvement which may be constructed, damaged, or destroyed thereon, and shall pay when due all claims for labor performed and materials furnished therefor. Trustor shall use the Property and Improvements solely for purposes authorized by the City Documents, shall not commit or allow waste of the Property, and shall not commit or allow any act upon or use of the Property which would violate any applicable law or order of any governmental authority, nor shall Trustor bring on or keep any article on the Property or cause or allow any condition to exist thereon which could invalidate or which would be prohibited by any insurance coverage required to be maintained on the Property pursuant to the City Documents.

7.4 Restrictions on Conveyance and Encumbrance; Acceleration. It shall be an Event of Default hereunder if any Transfer (as defined in the Loan Agreement) of the Property, any part thereof or any interest therein occurs in violation of the requirements of the City Documents. If any such Transfer occurs in violation of such requirements, without limiting the provisions of Section 8 hereof, all obligations secured by this Deed of Trust, irrespective of the maturity dates of such obligations, shall at the option of Beneficiary, and without demand, immediately become due and payable, subject to any applicable cure period.

7.5 Inspections; Books and Records. Beneficiary and its agents and representatives shall have the right at any reasonable time upon reasonable notice to enter upon the Property and inspect the Property to ensure compliance with the City Documents. Trustor shall maintain complete and accurate books of account and other records (including copies of supporting bills and invoices) adequate to document the use of the Loan Proceeds and the operation of the Property, together with copies of all written contracts, Leases and other instruments which affect the Property. The books, records, contracts, Leases and other instruments shall be subject to examination and inspection at any reasonable time by Beneficiary following two business days prior notice.

7.6 Charges, Liens, Taxes and Assessments. Trustor shall pay before delinquency all taxes, levies, assessments and other charges affecting the Property that are (or if not paid may become) a lien on all or part of the Property. Trustor may, at Trustor's expense, contest the

validity or application of any tax, levy, assessment or charge affecting the Property by appropriate legal proceedings promptly initiated and conducted in good faith and with due diligence, provided that (i) Beneficiary is reasonably satisfied that neither the Property nor any part thereof or interest therein will be in danger of being sold, forfeited, or lost as a result of such contest, and (ii) Trustor shall have posted a bond or furnished other security as may reasonably be required from time to time by Beneficiary; and provided further that Trustor shall timely make any payment necessary to prevent a lien foreclosure, sale, forfeiture or loss of the Property.

7.7 Subrogation. Beneficiary shall be subrogated to the liens of all encumbrances, whether released of record or not, which are discharged in whole or in part by Beneficiary in accordance with this Deed of Trust.

7.8 Hazard, Liability and Workers' Compensation Insurance. At all times during the term hereof, Trustor shall at Trustor's expense, maintain insurance policies in accordance with the requirements set forth in the City Documents. Trustor shall file with Beneficiary prior to the commencement of the term hereof, certificates (or such other proof as Beneficiary may reasonably require, including without limitation copies of the required insurance policies) evidencing each of the insurance policies and endorsements thereto as required pursuant to the City Documents, and such certificates (or policies) shall provide that at least thirty (30) days' prior written notice shall be provided to Beneficiary prior to the expiration, cancellation or change in coverage under each such policy. If any insurance policy required pursuant to the City Documents is canceled or the coverage provided thereunder is reduced, Trustor shall, within ten (10) days after receipt of written notice of such cancellation or reduction in coverage, but in no event later than the effective date of cancellation or reduction, file with Beneficiary a certificate showing that the required insurance has been reinstated or provided through another insurance company or companies. Upon failure to so file such certificate, Beneficiary may, without further notice and at its option, procure such insurance coverage at Trustor's expense, and Trustor shall promptly reimburse Beneficiary for such expense upon receipt of billing from Beneficiary.

7.9 Condition of Property. Trustor represents and warrants that except as disclosed to Beneficiary in writing, as of the date hereof: (i) Trustor has not received any notice from any governmental authority of any threatened or pending zoning, building, fire, or health code violation or violation of other governmental regulations concerning the Property that has not previously been corrected, and no condition on the Property violates any health, safety, fire, environmental, sewage, building, or other federal, state or local law, ordinance or regulation; (ii) no contracts, licenses, leases or commitments regarding the maintenance or use of the Property or allowing any third party rights to use the Property are in force; (iii) there are no threatened or pending actions, suits, or administrative proceedings against or affecting the Property or any portion thereof or the interest of Trustor in the Property; (iv) there are no threatened or pending condemnation, eminent domain, or similar proceedings affecting the Property or any portion thereof; (v) Trustor has not received any notice from any insurer of defects of the Property which have not been corrected; (vi) there are no natural or artificial conditions upon the Property or any part thereof that could result in a material and adverse change in the condition of the Property; (vii) all information that Trustor has delivered to Beneficiary, either directly or through Trustor's agents, is accurate and complete; and (viii) Trustor or Trustor's agents have disclosed to Beneficiary all material facts concerning the Property.

7.10 Hazardous Materials. Trustor represents and warrants that except as disclosed to Beneficiary in writing, as of the date hereof to the best knowledge of Trustor: (i) the Property is free and has always been free of Hazardous Materials (as defined below) and is not and has never been in violation of any Environmental Law (as defined below); (ii) there are no buried or partially buried storage tanks located on the Property; (iii) Trustor has received no notice, warning, notice of violation, administrative complaint, judicial complaint, or other formal or informal notice alleging that conditions on the Property are or have ever been in violation of any Environmental Law or informing Trustor that the Property is subject to investigation or inquiry regarding Hazardous Materials on the Property or the potential violation of any Environmental Law; (iv) there is no monitoring program required by the Environmental Protection Agency or any other governmental agency concerning the Property; (v) no toxic or hazardous chemicals, waste, or substances of any kind have ever been spilled, disposed of, or stored on, under or at the Property, whether by accident, burying, drainage, or storage in containers, tanks, holding areas, or any other means; (vi) the Property has never been used as a dump or landfill; and (vii) Trustor has disclosed to Beneficiary all information, records, and studies in Trustor's possession or reasonably available to Trustor relating to the Property concerning Hazardous Materials.

Trustor shall not cause or permit any Hazardous Materials (as defined in Section 9.3 of the Loan Agreement) to be brought upon, kept, stored or used in, on, under, or about the Property by Trustor, its agents, employees, contractors or invitees except for incidental supplies ordinarily used in the construction and operation of residential developments in compliance with all applicable laws, and shall not cause any release of Hazardous Materials into, onto, under or through the Property. If any Hazardous Material is discharged, released, dumped, or spilled in, on, under, or about the Property and results in any contamination of the Property or adjacent property, or otherwise results in the release or discharge of Hazardous Materials in, on, under or from the Property, Trustor shall promptly take all actions at its sole expense as are necessary to comply with all Environmental Laws (as defined below).

Trustor shall indemnify, defend (with counsel reasonably acceptable to Beneficiary), and hold Beneficiary and its elected and appointed officials, officers, agents and employees (collectively, "**Indemnitees**") harmless from and against any and all loss, claim, liability, damage, demand, judgment, order, penalty, fine, injunctive or other relief, cost, expense (including reasonable fees and expenses of attorneys, expert witnesses, and other professionals advising or assisting Beneficiary), action, or cause of action (all of the foregoing, hereafter individually "**Claim"** and collectively **"Claims"**) arising in connection with the breach of Trustor's covenants and obligations set forth in this Section 7.10 or otherwise arising in connection with the presence or release of Hazardous Materials in, on, under, or from the Property. The foregoing indemnity includes, without limitation, all costs of investigation, assessment, containment, removal, remediation of any kind, and disposal of Hazardous Materials, all costs of determining whether the Property is in compliance with Environmental Laws, all costs associated with bringing the Property into compliance with all applicable Environmental Laws, and all costs associated with claims for damages or injury to persons, property, or natural resources.

Without limiting the generality of the foregoing, Trustor shall, at Trustor's own cost and expense, do all of the following:

a. pay or satisfy any judgment or decree that may be entered against any Indemnitee

or Indemnitees in any legal or administrative proceeding incident to any matters against which Indemnitees are entitled to be indemnified under this Deed of Trust;

b. reimburse Indemnitees for any expenses paid or incurred in connection with any matters against which Indemnitees are entitled to be indemnified under this Deed of Trust; and

c. reimburse Indemnitees for any and all expenses, including without limitation out-of-pocket expenses and fees of attorneys and expert witnesses, paid or incurred in connection with the enforcement by Indemnitees of their rights under this Deed of Trust, or in monitoring and participating in any legal or administrative proceeding.

Trustor's obligation to indemnify the Indemnitees shall not be limited or impaired by any of the following, or by any failure of Trustor to receive notice of or consideration for any of the following: (i) any amendment or modification of any City Document; (ii) any extensions of time for performance required by any City Document; (iii) any provision in any of the City Documents limiting Beneficiary's recourse to property securing the Secured Obligations, or limiting the personal liability of Trustor, or any other party for payment of all or any part of the Secured Obligations; (iv) the accuracy or inaccuracy of any representation and warranty made by Trustor under this Deed of Trust or by Trustor or any other party under any City Document, (v) the release of Trustor or any other person, by Beneficiary or by operation of law, from performance of any obligation under any City Document; (vi) the release or substitution in whole or in part of any security for the Secured Obligations; and (vii) Beneficiary's failure to properly perfect any lien or security interest given as security for the Secured Obligations.

The provisions of this Section 7.10 shall be in addition to any and all other obligations and liabilities that Trustor may have under applicable law, and each Indemnitee shall be entitled to indemnification under this Section without regard to whether Beneficiary or that Indemnitee has exercised any rights against the Property or any other security, pursued any rights against any guarantor or other party, or pursued any other rights available under the City Documents or applicable law. The obligations of Trustor to indemnify the Indemnitees under this Section shall survive any repayment or discharge of the Secured Obligations, any foreclosure proceeding, any foreclosure sale, any delivery of any deed in lieu of foreclosure, and any release of record of the lien of this Deed of Trust.

Without limiting any of the remedies provided in this Deed of Trust, Trustor acknowledges and agrees that each of the provisions in this Section 7.10 is an environmental provision (as defined in Section 736(f)(2) of the California Code of Civil Procedure) made by Trustor relating to real property security (the "**Environmental Provisions**"), and that Trustor's failure to comply with any of the Environmental Provisions will be a breach of contract that will entitle Beneficiary to pursue the remedies provided by Section 736 of the California Code of Civil Procedure ("**Section 736**") for the recovery of damages and for the enforcement of the Environmental Provisions. Pursuant to Section 736, Beneficiary's action for recovery of damages or enforcement of the Environmental Provisions shall not constitute an action within the meaning of Section 726(a) of the California Code of Civil Procedure or constitute a money judgment for a deficiency or a deficiency judgment within the meaning of Sections 580a, 580b, 580d, or 726(b) of the California Code of Civil Procedure.

"**Environmental Laws**" means all federal, state or local statutes, ordinances, rules, regulations, orders, decrees, judgments or common law doctrines, and provisions and conditions of permits, licenses and other operating authorizations regulating, or relating to, or imposing liability or standards of conduct concerning (i) pollution or protection of the environment, including natural resources; (ii) exposure of persons, including employees and agents, to any Hazardous Material (as defined above) or other products, raw materials, chemicals or other substances; (iii) protection of the public health or welfare from the effects of by-products, wastes, emissions, discharges or releases of chemical substances from industrial or commercial activities; (iv) the manufacture, use or introduction into commerce of chemical substances, including without limitation, their manufacture, formulation, labeling, distribution, transportation, handling, storage and disposal; or (iv) the use, release or disposal of toxic or hazardous substances or Hazardous Materials or the remediation of air, surface waters, groundwater or soil, as now or may at any later time be in effect, including but not limited to the Toxic Substances Control Act [15 U.S.C. 2601, et seq.]; the Comprehensive Environmental Response, Compensation and Liability Act [42 U.S.C. Section 9601, et seq.], the Hazardous Materials Transportation Authorization Act [49 U.S.C. Section 5101, et seq.], the Resource Conservation and Recovery Act [42 U.S.C. 6901, et seq.], the Federal Water Pollution Control Act [33 U.S.C. Section 1251], the Clean Air Act [42 U.S.C. Section 7401, et seq.], the California Underground Storage of Hazardous Substances Act [California Health and Safety Code Section 25280, et seq.], the California Hazardous Substances Account Act [California Health and Safety Code Section 25300, et seq.], the California Hazardous Waste Act [California Health and Safety Code Section 25100, et seq.], the California Safe Drinking Water and Toxic Enforcement Act [California Health and Safety Code Section 25249.5, et seq.], and the Porter-Cologne Water Quality Control Act [California Water Code Section 13000, et seq.], as they now exist or are hereafter amended, together with any regulations promulgated thereunder.

7.11 Notice of Claims; Defense of Security; Reimbursement of Costs.

a. Notice of Claims. Trustor shall provide written notice to Beneficiary of any uninsured or partially uninsured loss affecting the Property through fire, theft, liability, or property damage in excess of an aggregate of Fifty Thousand Dollars ($50,000) within five (5) business days of the occurrence of such loss. Trustor shall ensure that Beneficiary shall receive timely notice of, and shall have a right to cure, any default under any other financing document or other lien affecting the Property and shall use best efforts to ensure that provisions mandating such notice and allowing such right to cure shall be included in all such documents. Within three business days of Trustor's receipt thereof, Trustor shall provide Beneficiary with a copy of any notice of default Trustor receives in connection with any financing document secured by the Property or any part thereof.

b. Defense of Security. At Trustor's sole expense, Trustor shall protect, preserve and defend the Property and title to and right of possession of the Property, the security of this Deed of Trust and the rights and powers of Beneficiary and Trustee created under it, against all adverse claims.

c. Compensation; Reimbursement of Costs. Trustor agrees to pay all reasonable fees, costs and expenses charged by Beneficiary or Trustee for any service that Beneficiary or Trustee may render in connection with this Deed of Trust, including without limitation, fees and

expenses related to provision of a statement of obligations or related to a reconveyance. Trustor further agrees to pay or reimburse Beneficiary for all costs, expenses and other advances which may be incurred or made by Beneficiary or Trustee in any efforts to enforce any terms of this Deed of Trust, including without limitation any rights or remedies afforded to Beneficiary or Trustee or both of them under Sections 7.17 and 8.2, whether or not any lawsuit is filed, or in defending any action or proceeding arising under or relating to this Deed of Trust, including reasonable attorneys' fees and other legal costs, costs of any disposition of the Property under the power of sale granted hereunder or any judicial foreclosure, and any cost of evidence of title.

d. Notice of Changes. Trustor shall give Beneficiary prior written notice of any change in the address of Trustor and the location of any Property, including books and records pertaining to the Property.

7.12 Indemnification. Trustor shall indemnify, defend (with counsel reasonably acceptable to Beneficiary), and hold harmless the Indemnitees (as defined in Section 7.10) from and against all Claims arising directly or indirectly in any manner in connection with or as a result of (a) any breach of Trustor's covenants under any City Document, (b) any representation by Trustor in any City Document which proves to be false or misleading in any material respect when made, (c) injury or death to persons or damage to property or other loss occurring on the Property or in any improvement located thereon, whether caused by the negligence or any other act or omission of Trustor or any other person or by negligent, faulty, inadequate or defective design, building, construction or maintenance or any other condition or otherwise, (d) any claim, demand or cause of action, or any action or other proceeding, whether meritorious or not, brought or asserted against any Indemnitee which relates to or arises out of the Property, or any City Document or any transaction contemplated thereby, or any failure of Trustor to comply with all applicable state, federal and local laws and regulations applicable to the Property, provided that no Indemnitee shall be entitled to indemnification under this Section for matters caused by such Indemnitee's gross negligence or willful misconduct. The obligations of Trustor under this Section shall survive the repayment of the Loan and shall be secured by this Deed of Trust. Notwithstanding any contrary provision contained herein, the obligations of Trustor under this Section shall survive any foreclosure proceeding, any foreclosure sale, any delivery of a deed in lieu of foreclosure, and any release or reconveyance of this Deed of Trust.

7.13. Limitation of Liability. Beneficiary shall not be directly or indirectly liable to Trustor or any other person as a consequence of any of the following: (i) Beneficiary's exercise of or failure to exercise any rights, remedies or powers granted to Beneficiary in this Deed of Trust; (ii) Beneficiary's failure or refusal to perform or discharge any obligation or liability of Trustor under any agreement related to the Property or under this Deed of Trust; (iii) any waste committed by Trustor, the lessees of the Property or any third parties, or any dangerous or defective condition of the Property; or (iv) any loss sustained by Trustor or any third party resulting from any act or omission of Beneficiary in managing the Property after an Event of Default, unless the loss is caused by the willful misconduct, gross negligence, or bad faith of Beneficiary. Trustor hereby expressly waives and releases all liability of the types described in this Section 7.13, and agrees that Trustor shall assert no claim related to any of the foregoing against Beneficiary.

7.14 Insurance and Condemnation Proceeds. Subject to the rights of any senior

lienholders, and notwithstanding anything contained in any of the City Documents, unless Beneficiary and Trustor otherwise agree in writing, any award of damages in connection with any condemnation for public use of, or injury to the Property or any part thereof shall be applied to restoration or repair of the Property, provided Trustor determines that such restoration or repair is economically feasible and there is no default under any City Document that is continuing beyond the expiration of all applicable cure periods. If Trustor determines that such restoration or repair is not economically feasible or if a default exists after expiration of all applicable cure periods, the insurance proceeds shall be applied to the sums secured by this Deed of Trust, with the excess, if any, paid to Trustor. In the event funds for such work are insufficient, Beneficiary may, in its sole discretion and subject to the approval of Beneficiary's governing board, advance such additional funds as may be necessary to allow the Property to be repaired or restored, and may add the amount thereof to the principal balance of the Note. If the Property is abandoned by Trustor, or if Trustor fails to respond to Beneficiary within 30 days from the date notice is mailed by Beneficiary to Trustor that the insurance carrier offers to settle a claim for insurance benefits, Beneficiary is authorized to collect and apply the insurance proceeds at Beneficiary's option either to restoration or repair of the Property or to the sums secured by this Deed of Trust

7.15 Release, Extension, Modification. At any time and from time to time, without liability therefor and without notice, upon written request of Beneficiary and presentation of this Deed of Trust and the Note for endorsement, Trustee may release or reconvey all or any part of the Property, consent to the making of any map or plat of the Property or part thereof, join in granting any easement or creating any restriction affecting the Property, or join in any extension agreement or other agreement affecting the lien or charge hereof. At any time and from time to time, without liability therefor and without notice, Beneficiary may (i) release any person liable for payment of any Secured Obligation, (ii) extend the time for payment or otherwise alter the terms of payment of any Secured Obligation; (iii) accept additional real or personal property of any kind as security for any Secured Obligation, or (iv) substitute or release any property securing the Secured Obligations.

7.16 Reconveyance. Upon written request of Beneficiary stating that all of the Secured Obligations have been satisfied in full, and upon surrender of this Deed of Trust, and the Note, Trustee shall reconvey, without warranty, the Property or so much of it as is then held under this Deed of Trust. The recitals in any reconveyance executed under this Deed of Trust of any matters or facts shall be conclusive proof of the truthfulness thereof. Trustor shall pay all fees of Trustee and all recordation fees related to such reconveyance.

7.17 Cure; Protection of Security. Beneficiary may cure any breach or default of Trustor, and if it chooses to do so in connection with any such cure, Beneficiary may also enter the Property and/or do any and all other things which it may in its reasonable discretion consider necessary and appropriate to protect the security of this Deed of Trust. Such other things may include: appearing in and/or defending any action or proceeding which purports to affect the security of, or the rights or powers of Beneficiary or Trustee under, this Deed of Trust; paying, purchasing, contesting or compromising any encumbrance, charge, lien or claim of lien which in Beneficiary's sole judgment is or may be senior in priority to this Deed of Trust, such judgment of Beneficiary to be conclusive as among Beneficiary, Trustee and Trustor; obtaining insurance and/or paying any premiums or charges for insurance required to be carried hereunder; otherwise

caring for and protecting any and all of the Property; and/or employing counsel, accountants, contractors and other appropriate persons to assist Beneficiary. Beneficiary may take any of the actions permitted under this Section 7.17 either with or without giving notice, except for notices required under applicable law. Any amounts disbursed by Beneficiary pursuant to this paragraph shall become additional indebtedness secured by this Deed of Trust.

8. Default and Remedies.

8.1 Events of Default. Trustor acknowledges and agrees that an Event of Default shall occur under this Deed of Trust upon the occurrence of any one or more of the following events:

a. Beneficiary's declaration of an Event of Default under any City Document, subject to the expiration of any applicable cure period set forth in such document;

b. Trustor fails to perform any monetary obligation which arises under this Deed of Trust, and does not cure that failure within ten (10) days following written notice from Beneficiary or Trustee;

c. If Trustor's interest in the Property or any part thereof is voluntarily or involuntarily sold, transferred, leased, encumbered, or otherwise conveyed in violation of Section 7.4 hereof or if any other Transfer occurs in violation of the Loan Agreement;

d. Trustor fails to maintain the insurance coverage required under the City Documents or otherwise fails to comply with the requirements of Section 7.8 hereof and Trustor fails to cure such default within the time specified in Section 7.8;

e. Subject to Trustor's right to contest such charges as provided herein, Trustor fails to pay taxes or assessments due on the Property or the Improvements or fails to pay any other charge that may result in a lien on the Property or the Improvements, and Trustor fails to cure such default within ten (10) days.

f. Any representation or warranty of Trustor contained in or made in connection with the execution and delivery of this Deed of Trust or in any certificate or statement furnished pursuant hereto or in any other City Document proves to have been false or misleading in any material adverse respect when made;

g. If, pursuant to or within the meaning of the United States Bankruptcy Code or any other federal or state law relating to insolvency or relief of debtors ("**Bankruptcy Law**"), Trustor or any general partner thereof (i) commences a voluntary case or proceeding; (ii) consents to the entry of an order for relief against Trustor or any general partner thereof in an involuntary case; (iii) consents to the appointment of a trustee, receiver, assignee, liquidator or similar official for Trustor or any general partner thereof; (iv) makes an assignment for the benefit of its creditors; or (v) admits in writing its inability to pay its debts as they become due.

h. If a court of competent jurisdiction enters an order or decree under any Bankruptcy Law that (i) is for relief against Trustor or any general partner thereof in an involuntary case, (ii) appoints a trustee, receiver, assignee, liquidator or similar official for

Trustor or any general partner thereof or substantially all of such entity's assets, (iii) orders the liquidation of Trustor or any general partner thereof, or (iv) issues or levies a judgment, writ, warrant of attachment or similar process against the Property or the Project, and in each case the order or decree is not released, vacated, dismissed or fully bonded within 60 days after its issuance.

i. The holder of any other debt instrument secured by a mortgage or deed of trust on the Property or part thereof declares an event of default thereunder and exercises a right to declare all amounts due under that debt instrument immediately due and payable, subject to the expiration of any applicable cure period set forth in such holder's documents; or

j. Trustor fails to perform any obligation arising under this Deed of Trust other than one enumerated in this Section 8.1, and does not cure that failure either within ten (10) days after written notice from Beneficiary or Trustee in the event of a monetary default, or within thirty (30) days after such written notice in the event of a nonmonetary default, provided that in the case of a nonmonetary default that in Beneficiary's reasonable judgment cannot reasonably be cured within thirty (30) days, an Event of Default shall not arise hereunder if Trustor commences to cure such default within thirty (30) days and thereafter prosecutes such cure to completion with due diligence and in good faith and in no event later than ninety (90) days, or such longer period as the City may approve, following receipt of notice of default.

8.2 Remedies. Subject to the applicable notice and cure provisions set forth herein, at any time after an Event of Default, Beneficiary and Trustee shall be entitled to invoke any and all of the rights and remedies described below, and may exercise any one or more or all, of the remedies set forth in any City Document, and any other remedy existing at law or in equity or by statute, subject to the nonrecourse provisions set forth in the Note. All of Beneficiary's rights and remedies shall be cumulative, and the exercise of any one or more of them shall not constitute an election of remedies. Beneficiary shall be entitled to collect all expenses incurred in pursuing the remedies provided hereunder, including without limitation reasonable attorneys' fees and costs.

a. Acceleration. Beneficiary may declare any or all of the Secured Obligations, including without limitation all sums payable under the Note and this Deed of Trust, to be due and payable immediately.

b. Receiver. Beneficiary may apply to any court of competent jurisdiction for, and obtain appointment of, a receiver for the Property.

c. Entry. Beneficiary, in person, by agent or by court-appointed receiver, may enter, take possession of, manage and operate all or any part of the Property, and may also do any and all other things in connection with those actions that Beneficiary may in its sole discretion consider necessary and appropriate to protect the security of this Deed of Trust. Such other things may include: taking and possessing copies of all of Trustor's or the then owner's books and records concerning the Property; entering into, enforcing, modifying, or canceling Leases on such terms and conditions as Beneficiary may consider proper; obtaining and evicting tenants; fixing or modifying Rents; collecting and receiving any payment of money owing to Trustor; completing any unfinished construction; and/or contracting for and making repairs and

alterations. If Beneficiary so requests, Trustor shall assemble all of the Property that has been removed from the Property and make all of it available to Beneficiary at the site of the Property. Trustor hereby irrevocably constitutes and appoints Beneficiary as Trustor's attorney-in-fact to perform such acts and execute such documents as Beneficiary in its sole discretion may consider to be appropriate in connection with taking these measures, including endorsement of Trustor's name on any instruments.

d. UCC Remedies. Beneficiary may exercise any or all of the remedies granted to a secured party under the UCC.

e. Judicial Action. Beneficiary may bring an action in any court of competent jurisdiction to foreclose this Deed of Trust in the manner provided by law for foreclosure of mortgages on real property and/or to obtain specific enforcement of any of the covenants or agreements of this Deed of Trust.

f. Power of Sale. Under the power of sale hereby granted, Beneficiary shall have the discretionary right to cause some or all of the Property, including any Property which constitutes personal property, to be sold or otherwise disposed of in any combination and in any manner permitted by applicable law.

8.3 Power of Sale. If Beneficiary elects to invoke the power of sale hereby granted, Beneficiary shall execute or cause the Trustee to execute a written notice of such default and of its election to cause the Property to be sold to satisfy the obligations hereof, and shall cause such notice to be recorded in the office of the Recorder of each County wherein the Property or some part thereof is situated as required by law and this Deed of Trust.

Prior to publication of the notice of sale, Beneficiary shall deliver to Trustee this Deed of Trust and the Note or other evidence of indebtedness which is secured hereby, together with a written request for the Trustee to proceed with a sale of the Property, pursuant to the provisions of law and this Deed of Trust.

Notice of sale having been given as then required by law, and not less than the time then required by law having elapsed after recordation of such notice of default, Trustee, without demand on Trustor, shall sell the Property at the time and place fixed by it in the notice of sale, either as a whole or in separate parcels and in such order as it may determine, at public auction to the highest bidder for cash in lawful money of the United States, payable at time of sale. Trustee may, and at Beneficiary's request shall, postpone sale of all or any portion of the Property by public announcement at such time and place of sale, and from time to time thereafter may postpone such sale by public announcement at the time and place fixed by the preceding postponement. Trustee shall deliver to the purchaser its deed conveying the property so sold, but without any covenant or warranty, express or implied. The recitals in such deed of any matters or facts shall be conclusive proof of the truthfulness thereof. Any person, including Trustor, Trustee, or Beneficiary, may purchase at such sale.

After deducting all costs, fees, and expenses of Trustee and of the trust hereby created, including reasonable attorneys' fees in connection with sale, Trustee shall apply the proceeds of sale to payment of all sums advanced or expended by Beneficiary or Trustee under the terms

hereof and all outstanding sums then secured hereby, and the remainder, if any, to the person or persons legally entitled thereto.

Without limiting the generality of the foregoing, Trustor acknowledges and agrees that regardless of whether or not a default has occurred hereunder, if an Event of Default has occurred under the City Documents, and if in connection with such Event of Default Beneficiary exercises its right to foreclose on the Property, then: (i) Beneficiary shall be entitled to declare all amounts due under the Note immediately due and payable, and (ii) the proceeds of any sale of the Property in connection with such foreclosure shall be used to pay all Secured Obligations, including without limitation, the outstanding principal balance and all other amounts due under the Note.

At any foreclosure sale, any person, including Trustor, Trustee or Beneficiary, may bid for and acquire the Property or any part of it to the extent permitted by then applicable law. Instead of paying cash for such property, Beneficiary may settle for the purchase price by crediting the sales price of the property against the following obligations:

a. First, the portion of the Secured Obligations attributable to the expenses of sale, costs of any action and any other sums for which Trustor is obligated to pay or reimburse Beneficiary or Trustee under Section 7.11(c); and

b. Second, the remaining balance of all other Secured Obligations in any order and proportions as Beneficiary in its sole discretion may choose.

8.4 Trustor's Right to Reinstate. Notwithstanding Beneficiary's acceleration of the sums secured by this Deed of Trust, Trustor shall have the right to have any proceedings begun by Beneficiary to enforce this Deed of Trust discontinued at any time prior to five days before sale of the Property pursuant to the power of sale contained in this Deed of Trust or at any time prior to entry of a judgment enforcing this Deed of Trust if: (a) Trustor pays Beneficiary all sums which would be then due under the Loan Documents if the Secured Obligations had no acceleration provision; (b) Trustor cures all breaches of any other covenants or agreements of Trustor contained in this Deed of Trust; (c) Trustor pays all reasonable expenses incurred by Beneficiary and Trustee in enforcing the covenants and agreements of Trustor contained in this Deed of Trust, and in enforcing Beneficiary's and Trustee's remedies as provided herein, including, but not limited to, reasonable attorney's fees; and (d) Trustor takes such action as Beneficiary may reasonably require to assure that the lien of this Deed of Trust, Beneficiary's interest in the Property and Trustor's obligation to pay the sums secured by this Deed of Trust shall continue unimpaired. Upon such payment and cure by Trustor, this Deed of Trust and the obligations secured hereby shall remain in full force and effect as if no acceleration had occurred.

Nothing contained in Sections 8.3 and 8.4 is intended to expand upon or limit the rights of Trustor and Beneficiary under California law regarding Beneficiary's exercise of the power of sale or Trustor's reinstatement rights.

9. Trustor's Waivers. To the fullest extent permitted by law, Trustor waives: (a) all

statutes of limitations as a defense to any action or proceeding brought against Trustor by Beneficiary; (b) the benefit of all laws now existing or which may hereafter be enacted providing for any appraisement, valuation, stay, extension, redemption or moratorium; (c) all rights of marshalling in the event of foreclosure; and (d) all presentments, demands for performance, notices of nonperformance, protests, notices of protest, notices of dishonor, notices of acceptance of this Deed of Trust and of the existence, creation, or incurring of new or additional indebtedness, and demands and notices of every kind.

10. Miscellaneous Provisions.

10.1 Additional Provisions. The City Documents grant further rights to Beneficiary and contain further agreements and affirmative and negative covenants by Trustor which apply to this Deed of Trust and the Property.

10.2 Notices. Trustor requests that a copy of notice of default and notice of sale be mailed to Trustor at the address set forth below. That address is also the mailing address of Trustor as debtor under the UCC. Beneficiary's address set forth below is the address for Beneficiary as secured party under the UCC. Except for any notice required under applicable law to be given in another manner, all notices to be sent pursuant to this Deed of Trust shall be made in writing, and sent to the parties at their respective addresses specified below or to such other address as a party may designate by written notice delivered to the other parties in accordance with this Section. All such notices shall be sent by:

a. personal delivery, in which case notice shall be deemed delivered upon receipt;

b. certified or registered mail, return receipt requested, in which case notice shall be deemed delivered two (2) business days after deposit, postage prepaid in the United States mail;

c. nationally recognized overnight courier, in which case notice shall be deemed delivered one (1) day after deposit with such courier; or

d. facsimile transmission, in which case notice shall be deemed delivered on transmittal, provided that a transmission report is generated reflecting the accurate transmission thereof.

Beneficiary: City of Newark
37101 Newark Boulevard
Newark, CA 94560
Attention: City Manager

Trustor: Allied 39802 Cedar, LLC
c/o Allied Housing, Inc.
40849 Fremont Blvd.
Fremont, CA 94538
Attention: Chief Executive Officer

With a copy to:

Gubb & Barshay LLP
235 Montgomery Street, Suite 1110
San Francisco, CA 94194
Attention: Nicole Kline

Trustee: Chicago Title Company

_____

_____

Attention: _____

10.3 Binding on Successors. The terms, covenants and conditions of this Deed of Trust shall be binding upon and inure to the benefit of the heirs, administrators, executors, successors in interest, transferees, and assigns of the Trustor, Beneficiary and Trustee; provided however this Section 10.3 does not waive the provisions of Section 7.4.

10.4 Substitution of Trustee. Beneficiary may from time to time or at any time substitute a trustee or trustees to execute the trust hereby created, and when any such substitution has been filed for record in the office of the Recorder of Alameda County, it shall be conclusive evidence of the appointment of such trustee or trustees, and such new trustee or trustees shall succeed to all of the powers and duties of the Trustee named herein.

10.5 Attorneys' Fees and Costs. In any action or proceeding to foreclose this Deed of Trust or to enforce any right of Beneficiary or of Trustee, Trustor shall pay to Beneficiary and Trustee all costs of such action or proceeding, including reasonable attorneys' fees.

10.6 Governing Law; Severability; Interpretation. This Deed of Trust shall be governed by the laws of the State of California without regard to principles of conflicts of laws. Trustor agrees that any controversy arising under or in relation to this Deed of Trust shall be litigated exclusively in the jurisdiction where the Property is located (the "**Property Jurisdiction**"). The state and federal courts and authorities with jurisdiction in the Property Jurisdiction shall have exclusive jurisdiction over all controversies which shall arise under or in relation to the City Documents. Trustor irrevocably consents to service, jurisdiction, and venue of such courts for any such litigation, and waives any other venue to which it might be entitled by virtue of domicile, habitual residence or otherwise. If any provision of this Deed of Trust is held unenforceable or void, that provision shall be deemed severable from the remaining provisions, and shall in no way affect the validity of this Deed of Trust. The captions used in this Deed of Trust are for convenience only and are not intended to affect the interpretation or construction of the provisions herein contained. In this Deed of Trust, whenever the context so requires, the singular number includes the plural.

10.7 Waiver, Modification and Amendment. Any waiver by Beneficiary of any obligation of Trustor hereunder must be in writing, and no waiver shall be construed as a continuing waiver. No waiver shall be implied from any delay or failure by Beneficiary or Trustee to take action on account of any default of Trustor. Consent by Beneficiary or Trustee to

any act or omission by Trustor shall not be construed as a consent to any other or subsequent act or omission or to waive the requirement for Beneficiary's or Trustee's consent to be obtained in any future or other instance. No amendment to or modification of this Deed of Trust shall be effective unless and until such amendment or modification is in writing, executed by Trustor and Beneficiary. Without limiting the generality of the foregoing, Beneficiary's acceptance of payment of any sum secured hereby after its due date shall not constitute a waiver by Beneficiary of its right either to require prompt payment when due of all other sums so secured or to declare default for failure so to pay.

10.8 Action By Beneficiary. Except as may be otherwise specifically provided herein, whenever any approval, notice, direction, or consent by the Beneficiary is required or permitted under this Agreement, such action shall be in writing, and such action may be given, made or taken by Beneficiary's Executive Director or by any person who shall have been designated by Beneficiary's Executive Director, without further approval by the governing board of Beneficiary. Beneficiary shall use reasonable best efforts to respond to requests for any such approval, notice, direction, or consent in a timely manner. In any approval, consent, or other determination by Beneficiary required hereunder, Beneficiary shall act reasonably and in good faith.

10.9 Joint and Several Liability. If Trustor consists of more than one person or entity, each shall be jointly and severally liable for the faithful performance of all of Trustor's obligations under this Deed of Trust.

10.10 Time is of the Essence. Time is of the essence for each provision of this Deed of Trust.

SIGNATURES ON FOLLOWING PAGE.

IN WITNESS WHEREOF, Trustor has executed this Deed of Trust as of the date first written above.

ALLIED 39802 CEDAR, LLC
a California limited liability company

By: Allied Housing, Inc., a California
nonprofit public benefit corporation,
its sole member and manager

By:_____

Its:_____

SIGNATURES MUST BE NOTARIZED.

EXHIBIT "A"
LEGAL DESCRIPTION

ACKNOWLEDGMENT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)

County of Alameda)

On_____ before me, _____, Notary Public, , personally appeared, _____, who proved to me the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under penalty of perjury under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature_____

5161831.2

Attachment B, Exhibit 4

SECURED PROMISSORY NOTE
(Cedar Community Apartments)

$44,156,293.00 Newark, California
_____, 2022

FOR VALUE RECEIVED, ALLIED 39802 CEDAR, LLC, a California limited liability company ("**Borrower**"), promises to pay to the City of Newark, a California municipal corporation ("**City**"), in lawful money of the United States of America, the principal sum of Forty-Four Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($44,156,293.00), or so much thereof as may be advanced by City pursuant to the Loan Agreement referred to below, together with interest on the outstanding principal balance in accordance with the terms and conditions described herein. The original principal balance of this Note shall consist of Thirty-Eight Million One Hundred Fifty-Six Thousand Two Hundred and Ninety-Three Dollars ($38,156,293.00) from the Homekey Grant and Six Million Dollars ($6,000,000) of City Funds (as those terms are defined in the Loan Agreement). Simple interest shall accrue on the outstanding principal balance of the City Funds at the rate of three percent (3%) per annum commencing upon the date of disbursement of the loan proceeds. No interest shall accrue upon the Homekey Grant portion of the Loan. Interest shall be calculated on the basis of a year of 365 days, and charged for the actual number of days elapsed.

This Secured Promissory Note (this "**Note**") has been executed and delivered pursuant to and in accordance with an Loan Agreement executed by and between Borrower and City, dated as of _____, 2022 (the "**Loan Agreement**"), and is subject to the terms and conditions of the Loan Agreement, which is by this reference incorporated herein and made a part hereof. Capitalized terms used but not defined herein shall have the meaning ascribed to such terms in the Loan Agreement.

This Note is secured by a Deed of Trust, Assignment of Rents, Security Agreement and Fixture Filing ("**Deed of Trust**") dated as of the date hereof, executed by Borrower for the benefit of City and encumbering the property described therein. City shall be entitled to the benefits of the security provided by the Deed of Trust and shall have the right to enforce the covenants and agreements contained herein, in the Regulatory Agreement, and the Loan Agreement. The Regulatory Agreement shall remain effective for the full term thereof and shall survive the repayment of this Note.

1. PAYMENTS

1.1 REPAYMENT OF THE NOTE AMOUNT.

(a) Annual Payments. Borrower shall make annual payments of principal and interest to the City in the amount of the City Prorata Percentage of Residual Receipts. Such annual payments shall be due and payable in arrears no later than May 1 of each year with respect to the previous calendar year, commencing on May 1st of the first year after the City's issuance of a certificate of occupancy for the Improvements. Borrower shall provide

the City with any documentation reasonably requested by the City to substantiate Borrower's determination of Residual Receipts. The Parties hereto acknowledge that they expect the Residual Receipts amount to be zero during the initial years of the Project until Refinancing occurs. Repayments shall be credited first to interest, then to principal.

(b) Sharing of Residual Receipts with Other Lenders. The City acknowledges that the County of Alameda (the "**County**") and other lenders to be set forth in the Financing Plan may provide additional financing for the Project. The City agrees to share in sixty percent (60%) of seventy-five percent (75%) of Residual Receipts, pro-rata in proportion to the amount of City Funds, and the financing provided by the County (the "**City Prorata Percentage**"). The Borrower may pay the County up to forty percent (40%) of seventy-five Percent (75%) of the Residual Receipts, and may retain the remaining twenty-five percent (25%) of Residual Receipts.

(c) Default Under Project Homekey Agreement. In the event that City and/or Borrower is required to repay some or all of the Homekey Grant pursuant to the Project Homekey Agreement, Borrower shall be responsible for making such payment to the State of California. The amount of Borrower's repayment of the Homekey Grant to the State of California shall be credited against the balance of this Note.

(d) Payment of Remaining Balance. Developer shall pay all outstanding principal and accrued interest on the City Loan, in full, on the earliest to occur of (i) a Developer Event of Default for which the City exercises its right to cause the Loan indebtedness to become immediately due and payable, and (ii) the fifty-fifth (55th) anniversary of the date of this Note ("**Maturity Date**").

(e) Partial Forgiveness. Upon receipt of written confirmation from the State of California that the Parties' obligations under the Project Homekey Agreement have been satisfied and that the Parties are no longer responsible for repayment of the Homekey Grant under any circumstances, the Homekey Grant portion of this Note shall be forgiven.

1.2 DUE ON SALE. The entire unpaid principal balance and all interest and other sums accrued hereunder shall be due and payable upon the Transfer (as defined in Section 7.2 of the Loan Agreement) absent City consent, of all or any part of the Project or the Property or any interest therein other than a Transfer permitted without City consent pursuant to the Loan Agreement. Without limiting the generality of the foregoing, this Note shall not be assumable without City's prior written consent, which consent may be granted or denied in City's sole discretion; provided however, this Note may be assumed in connection with a permitted transfer as described in Section 7.3 of the Loan Agreement.

1.3 PREPAYMENT. Borrower may, without premium or penalty, at any time and from time to time, prepay all or any portion of the outstanding principal balance due under this Note, provided that each such prepayment is accompanied by accrued interest on the amount of principal prepaid calculated to the date of such prepayment. Prepayments shall be applied first to any unpaid late charges and other costs and fees then due, then to accrued but unpaid interest, and then to principal.

1.4 MANNER OF PAYMENT. All payments of principal and interest on this Note shall be made to City at 37101 Newark Avenue, Newark, California 94560 or such

other place as City shall designate to Borrower in writing, or by wire transfer of immediately available funds to an account designated by City in writing.

2. DEFAULTS AND REMEDIES.

2.1 EVENTS OF DEFAULT. The occurrence of any one or more of the following events shall constitute an event of default hereunder ("**Event of Default**"):

(A) Borrower fails to pay when due the principal and interest payable hereunder and such failure continues for thirty (30) days after City notifies Borrower thereof in writing.

(B) Borrower fails to timely repay the portion of the Homekey Grant to the State of California upon demand of the State of California pursuant to the Project Homekey Agreement;

(C) Pursuant to or within the meaning of the United States Bankruptcy Code or any other federal or state law relating to insolvency or relief of debtors ("**Bankruptcy Law**"), Borrower or any general partner thereof (i) commences a voluntary case or proceeding; (ii) consents to the entry of an order for relief against Borrower or any general partner thereof in an involuntary case; (iii) consents to the appointment of a trustee, receiver, assignee, liquidator or similar official for Borrower or any general partner thereof; (iv) makes an assignment for the benefit of its creditors; or (v) admits in writing its inability to pay its debts as they become due.

(D) A court of competent jurisdiction enters an order or decree under any Bankruptcy Law that (i) is for relief against Borrower or any general partner thereof in an involuntary case, (ii) appoints a trustee, receiver, assignee, liquidator or similar official for Borrower or any general partner thereof or substantially all of such entity's assets, (iii) orders the liquidation of Borrower or any general partner thereof, or (iv) issues or levies a judgment, writ, warrant of attachment or similar process against the Property or the Project, and in each case the order or decree is not released, vacated, dismissed or fully bonded within 60 days after its issuance.

(E) The occurrence of a Transfer in violation of Article VII of the Loan Agreement.

(F) A default is declared under any debt instrument secured by a mortgage or deed of trust on the Project or the Property and remains uncured beyond any applicable cure period such that the holder of such instrument has the right to accelerate payment thereunder following written notice from the City.

(G) Borrower fails to maintain insurance on the Property and the Project as required pursuant to the City Documents and Borrower fails to cure such default within 10 days.

(H) Subject to Borrower's right to contest the following charges pursuant to the City Documents, if Borrower fails to pay taxes or assessments due on the Property or the Project or fails to pay any other charge that may result in a lien on the Property or the Project, and Borrower fails to cure such default within 10 days.

(I) If any representation or warranty contained in any City Document, or any certificate furnished in connection therewith, or in connection with any request for

disbursement of the proceeds of the Loan (the "**Loan Proceeds**") proves to have been false or misleading in any material adverse respect when made and continues to be materially adverse to the City.

(J) An Event of Default shall have been declared under the Regulatory Agreement or any City Document, and remains uncured beyond the expiration of any applicable cure period.

2.2 REMEDIES. Upon the occurrence of an Event of Default hereunder, City may, at its option (i) by written notice to Borrower, declare the entire unpaid principal balance of the City Funds portion of this Note, together with all accrued interest thereon and all sums due hereunder, immediately due and payable regardless of any prior forbearance, (ii) if the Event of Default arises from Borrower's failure to timely repay the Homekey Grant to the State of California after demand therefor, by written notice to Borrower, declare the entire Homekey Grant portion of this Note, together with all sums due hereunder, immediately due and payable regardless of any prior forbearance, (iii) exercise any and all rights and remedies available to it under applicable law, and (iv) exercise any and all rights and remedies available to City under this Note and the other City Documents, including without limitation the right to pursue foreclosure under the Deed of Trust. Borrower shall pay all reasonable costs and expenses incurred by or on behalf of City including, without limitation, reasonable attorneys' fees, incurred in connection with City's enforcement of this Note and the exercise of any or all of its rights and remedies hereunder and all such sums shall be a part of the indebtedness secured by the Deed of Trust. The rights and remedies of City under this Note shall be cumulative and not alternative.

2.3 DEFAULT RATE. Upon the occurrence of an Event of Default, interest shall automatically be increased without notice to the rate of ten percent (10%) per annum (the "**Default Rate**"); provided however, if any payment due hereunder is not paid when due, the Default Rate shall apply commencing upon the due date for such payment. When Borrower is no longer in default, the Default Rate shall no longer apply, and the interest rate shall once again be the rate specified in the first paragraph of this Note. Notwithstanding the foregoing provisions, if the interest rate charged exceeds the maximum legal rate of interest, the rate shall be the maximum rate permitted by law. The imposition or acceptance of the Default Rate shall in no event constitute a waiver of a default under this Note or prevent City from exercising any of its other rights or remedies.

3. MISCELLANEOUS

3.1 WAIVERS; BORROWER'S WAIVERS. No waiver by City of any right or remedy under this Note shall be effective unless in a writing signed by City. Neither the failure nor any delay in exercising any right, power or privilege under this Note will operate as a waiver of such right, power or privilege, and no single or partial exercise of any such right, power or privilege by City will preclude any other or further exercise of such right, power or privilege or the exercise of any other right, power or privilege. No waiver that may be given by City will be applicable except in the specific instance for which it is given. No notice to or demand on Borrower will be deemed to be a waiver of any obligation of Borrower or of the right of City to take further action without notice or demand as provided in this Note.

To the maximum extent permitted by applicable law Borrower hereby waives presentment, demand, protest, notices of dishonor and of protest and all defenses and pleas on

the grounds of any extension or extensions of the time of payment or of any due date under this Note, in whole or in part, whether before or after maturity and with or without notice.

3.2 NOTICES. Any notice required or permitted to be given hereunder shall be given in accordance with Section 12.3 of the Loan Agreement.

3.3 SEVERABILITY. If any provision in this Note is held invalid or unenforceable by any court of competent jurisdiction, the other provisions of this Note will remain in full force and effect. Any provision of this Note held invalid or unenforceable only in part or degree will remain in full force and effect to the extent not held invalid or unenforceable.

3.4 GOVERNING LAW; VENUE. This Note shall be governed by the laws of the State of California without regard to principles of conflicts of laws. Any legal action filed in connection with this Note shall be filed in the Superior Court of Alameda County, California, or in the Federal District Court for the Northern District of California.

3.5 PARTIES IN INTEREST. This Note shall bind Borrower and its successors and assigns and shall accrue to the benefit of City and its successors and assigns.

3.6 SECTION HEADINGS, CONSTRUCTION. The headings of Sections in this Note are provided for convenience only and will not affect its construction or interpretation.

3.7 RELATIONSHIP OF THE PARTIES. The relationship of Borrower and City under this Note is solely that of borrower and lender, and the loan evidenced by this Note and secured by the Deed of Trust will in no manner make City the partner or joint venturer of Borrower.

3.8 TIME IS OF THE ESSENCE. Time is of the essence with respect to every provision of this Note.

3.9 NONRECOURSE. Except as expressly provided in this Section 3.9, neither Borrower nor its partners shall have personal liability for payment of the principal of, or interest on, this Note, and the sole recourse of City with respect to the payment of the principal of, and interest on, this Note shall be to the Project, the Property and any other collateral held by City as security for this Note; provided however, nothing contained in the foregoing limitation of liability shall: (i) limit or impair the enforcement against all such security for the Note of all the rights and remedies of the City thereunder; (ii) be deemed in any way to impair the right of the City to assert the unpaid principal amount of the Note as demand for money within the meaning and intendment of Section 431.70 of the California Code of Civil Procedure or any successor provision thereto; or (iii) be deemed in any way to limit the rights of the City to obtain specific performance by the Borrower of its covenants under the City Documents, other than the covenants to pay the City principal and interest due under the Note.

The foregoing limitation of liability is intended to apply only to the obligation for the repayment of the principal of, and payment of interest on the Note; nothing contained herein is intended to relieve the Borrower of its obligation to indemnify the City under this Agreement, or liability to the extent of any loss for: (i) fraud or willful misrepresentation by the Borrower; (ii) the failure to pay taxes, assessments or other charges which may create liens on the Property that are payable or applicable prior to any foreclosure under the Deed of

Trust (to the full extent of such taxes, assessments or other charges); (iii) the fair market value of any personal property or fixtures removed or disposed of by the Borrower other than in accordance with the Deed of Trust; and/or (iv) the misappropriation of any proceeds by the Borrower under any insurance policies or awards resulting from condemnation or the exercise of the power of eminent domain or by reason of damage, loss or destruction to any portion of the Development

IN WITNESS WHEREOF, Borrower has executed and delivered this Note as of the date first written above.

BORROWER:

ALLIED 39802 CEDAR, LLC,
a California limited liability company

By: Allied Housing, Inc., a California
nonprofit public benefit corporation
its sole member and manager

By:_____,

5161828.2

Attachment B, Exhibit 5

RECORDING REQUESTED BY
AND WHEN RECORDED MAIL TO:

Alameda County
Housing and Community Development Department
224 W. Winton Avenue, Room 108
Hayward, CA 94544
Attention: Housing Director

No fee for recording pursuant to
Government Code Section 27383 and 27388.1

(SPACE ABOVE THIS LINE FOR RECORDER'S USE)

SUBORDINATION AGREEMENT
(Alameda-Newark – Cedar Community Apartments)

THIS SUBORDINATION AGREEMENT (the "Agreement") is made as of October 1, 2022, by Allied 39802 Cedar LLC, a California limited liability company (the "Borrower"), the County of Alameda, a political subdivision of the State of California (the "County"), and the City of Newark, a municipal corporation (the "City").

RECITALS

A. The Borrower owns or will own certain real property located at 39802 Cedar Boulevard, in Newark, California, County of Alameda, State of California as more particularly described in Exhibit A (the "Property"). Borrower intends to acquire an existing hotel and convert it to provide one hundred twenty five (125) housing units, one hundred twenty four (124) of which will house persons qualifying for assistance under the HOME-American Rescue Plan and one of which will be a manager's unit (collectively, the "Improvements") on the Property. The Improvements will also be rehabilitated and extended to include a property management office and other ancillary improvements. The Property and the Improvements are collectively referred to as the "Development."

B. Borrower and the County are entering into that certain County Loan Agreement (Alameda County HOME ARP – Cedar Community Apartments Place) (the "County Loan Agreement") dated the same date as this Agreement, pursuant to which the County has agreed to provide a loan to Borrower in the amount of Four Million Dollars ($4,000,000) (the "County Loan"). The County Loan will be used to finance the acquisition and certain other costs associated with the Development. The County Loan is funded with funds appropriated under Section 3205 of the American Rescue Plan Act of 2021 (P.L. 117-2) ("HOME ARP") to provide homelessness assistance and supportive services.

C. The County Loan is evidenced by a Promissory Note (Alameda County HOME ARP – Cedar Community Apartments) in the amount of the County Loan (the "County Note") dated the same date as this Agreement, and secured by a Deed of Trust with Assignment of Rents,

Security Agreement, and Fixture Filing (Alameda County HOME ARP – Cedar Community Apartments) dated the same date as this Agreement naming Borrower as trustor, the County as beneficiary and Chicago Title Company, a California corporation ("Title Company"), as trustee (the "County Deed of Trust"). In connection with the County Loan, the County and Borrower will also execute a Regulatory Agreement and Declaration of Restrictive Covenants (Alameda County HOME ARP – Cedar Community Apartments) (the "County Regulatory Agreement") dated the same date as this Agreement. The County Deed of Trust and the County Regulatory Agreement will be recorded against the Property in the Official Records concurrently herewith. Collectively, the County Loan Agreement, the County Deed of Trust, the County Note, and the County Regulatory Agreement are referred to as the "County Loan Documents".

D. Borrower and the City are entering into that certain Loan Agreement (Cedar Community Apartments Place) (the "City Loan Agreement") dated the same date as this Agreement, pursuant to which the City has agreed to provide a loan to Borrower in the amount of Forty-Four Million One Hundred Fifty Six Thousand Two Hundred Ninety Three Dollars ($44,156,293) (the "City Loan"). The City Loan will be used finance the acquisition and other costs associated with the Development. All but Six Million Dollars ($6,000,000) of the City Loan is funded with funds from the State of California Department of Housing and Community Development Homekey Program Funds under California Assembly Bill No. 140 (Chapter 111, Statutes of 2021) and the HomeKey Program Notice of Funding Availability Round (2) issued on September 9, 2021 and amended on January 14, 2022 and May 5, 2022. Homekey grant funds are derived primarily from the State's General Fund and its direct allocation of the federal Coronavirus State Fiscal Recovery Fund, established by the American Rescue Plan Act of 2021. The remaining Six Million Dollars ($6,000,000) of the City loan is funded with the City's Housing Impact Fee Fund and American Rescue Plan Act of 2021 funds that had been allocated to the City.

E. The City Loan is evidenced by a Secured Promissory Note (Cedar Community Apartments) in the amount of the City Loan (the "City Note") dated the same date as this Agreement, and secured by a Deed of Trust with Assignment of Rents, Security Agreement, and Fixture Filing (Cedar Community Apartments) dated the same date as this Agreement naming Borrower as trustor, the City as beneficiary and Chicago Title Company, a California corporation ("Title Company"), as trustee (the "City Deed of Trust"). In connection with the City Loan, the City and Borrower will also execute an Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants (Cedar Community Apartments) (the "City Regulatory Agreement") dated the same date as this Agreement. The City Deed of Trust and the City Regulatory Agreement will be recorded against the Property in the Official Records concurrently herewith. Collectively, the City Loan Agreement, the City Deed of Trust, the City Note, and the City Regulatory Agreement are referred to as the "City Loan Documents".

F. Borrower, the City, and the County hereby acknowledge and agree that the documents referenced herein shall be recorded in the Official Records in the following order:

1. City Regulatory Agreement
2. County Regulatory Agreement
3. City Deed of Trust

4. County Deed of Trust

G. As a condition to funding the City Loan, the City requires that the County and Borrower execute and deliver this Subordination Agreement, and that the County provide the City notice of defaults and the right to cure defaults under the County Loan Documents.

H. As a condition to funding the County Loan, the County requires that the City and Borrower execute and deliver this Subordination Agreement, and that the City provide the County notice of defaults and the right to cure defaults under the City Loan Documents and the City Regulatory Agreement.

NOW THEREFORE, for valuable consideration the parties agree as follows:

1. Borrower and the County each acknowledge and agree for the benefit of the City that the City Regulatory Agreement and any modifications, renewals, or extensions thereof approved in writing by the County, shall unconditionally be and at all times remain a lien or charge on the Property prior and superior to the County Regulatory Agreement. The County subordinates the County Regulatory Agreement to the lien or charge of the City Regulatory Agreement.

2. Borrower and the County each acknowledge and agree for the benefit of the City that the City Regulatory Agreement and any modifications, renewals, or extensions thereof approved in writing by the County, shall unconditionally be and at all times remain a lien or charge on the Property prior and superior to the rights of the County under the County Deed of Trust. The County intentionally and unconditionally subordinates all of the County's right, title and interest in and to the County Deed of Trust to the lien or charge of the City Regulatory Agreement.

3. Borrower and the City each acknowledge and agree for the benefit of the County that the County Regulatory Agreement and any modifications, renewals, or extensions thereof approved in writing by the City, shall unconditionally be and at all times remain a lien or charge on the Property prior and superior to the rights of the City under the City Deed of Trust. The City intentionally and unconditionally subordinates all of the City's right, title and interest in and to the City Deed of Trust to the lien or charge of the County Regulatory Agreement.

4. Borrower and the County each agree that the City Deed of Trust and any modifications, renewals, or extensions thereof approved in writing by the County, shall unconditionally be and at all times remain a lien or charge on the Property prior and superior to the rights of the County under the County Deed of Trust. The County intentionally and unconditionally subordinates all of the County's right, title and interest in and to the County Deed of Trust to the lien or charge of the City Deed of Trust.

5. The County agrees that, upon the occurrence of an event of default under the County Loan Documents, the County shall:

(a) concurrently with notifying Borrower of the occurrence of an event of default, notify the City of the occurrence of such event of default by delivering a notice to the City, at its address set forth in the City Loan Agreement;

(b) permit the City to cure or correct (provided that such event of default is curable) any such event of default within ninety (90) calendar days after receipt of such notice;

(c) accept all payments and all acts done by the City on behalf of Borrower within the cure period specified in Paragraph 5(b) above as though the same had been timely done and performed by Borrower, so that such acts and payments shall fully and totally cure and correct all such defaults, breaches, failures or refusals for all purposes; and

(d) have the continuing right to record a notice of default, obtain a court appointed receiver and otherwise exercise the County's rights and remedies under the County Loan Documents during the above-mentioned cure period.

6. The City agrees that, upon the occurrence of an event of default under the City Loan Documents, the City shall:

(a) concurrently with notifying Borrower of the occurrence of an event of default, notify the County of the occurrence of such event of default by delivering a notice to the County, at its address set forth in the County Loan Agreement;

(b) permit the County to cure or correct (provided that such event of default is curable) any such event of default within ninety (90) calendar days after receipt of such notice;

(c) accept all payments and all acts done by the County on behalf of Borrower within the cure period specified in Paragraph 6(b) above as though the same had been timely done and performed by Borrower, so that such acts and payments shall fully and totally cure and correct all such defaults, breaches, failures or refusals for all purposes; and

(d) have the continuing right to record a notice of default, obtain a court appointed receiver and otherwise exercise the City's rights and remedies under the City Loan Documents during the above-mentioned cure period.

7. The parties hereto agree to cooperate with each other and perform any acts and execute, acknowledge and deliver any additional agreements, documents, or instruments that may be reasonably necessary or desirable to carry out the provisions or to effectuate the purpose of this Agreement.

8. If, subject to the terms of Section 6 above, prior to any foreclosure sale of the Development under the City Deed of Trust, the County takes title to or possession of the Development pursuant to a foreclosure sale of the Development under the County Deed of Trust and cures the outstanding defaults under the City Loan, if any, the City hereby agrees not to exercise any rights it may have to accelerate the City Loan by reason of the transfer of title or possession to the County, or if acceleration has already occurred, the City hereby agrees that it

will reinstate the City Loan, as applicable, at that time, and agrees that it will recognize the County as borrower under the City Loan under the same terms and conditions of said City Loan, provided that: (i) the County expressly assumes all of Borrower's obligations under the City Loan Documents, and (ii) the County provides the City with evidence reasonably satisfactory to the City that the County has authority to assume all of Borrower's obligations under City Loan Documents.

9. If the County takes title to the Development pursuant to a foreclosure sale of the Development under the County Deed of Trust and cures the outstanding defaults under the City Loan Documents, if any, the County shall have the right to transfer the Development to another nonprofit housing developer reasonably approved in advance in writing by the City. In connection with any such transfer approved by the County, the City agrees that such transfer shall not constitute a default under the City Loan Documents, and the City shall not exercise any rights it may have to accelerate the City Loan as a result of such transfer, provided such transferee expressly assumes the obligations of Borrower under the City Loan Documents.

10. This Agreement represents the entire agreement among the parties on the subject matter hereof, and except as expressly provided herein, shall not be affected by reference to any other documents. Neither this Agreement nor any provision hereof may be changed, waived, discharged, or terminated orally, but such may be accomplished only by an instrument in writing signed by the party against whom enforcement of the change, waiver, discharge, or termination is sought.

11. If any of the provisions or terms of this Agreement shall for any reason be held invalid or unenforceable, such invalidity or unenforceability shall not affect any other of the terms hereof, and this Agreement shall be construed as if such unenforceable term had never been contained herein.

12. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute and be construed as one and the same instrument.

Exhibit A is attached hereto and incorporated herein by this reference.

[SIGNATURES ON FOLLOWING PAGES]

IN WITNESS WHEREOF, the parties have entered into this Agreement, as of the date first written above.

BORROWER:

Allied 39802 Cedar LLC,
a California limited liability company

By: Allied Housing, Inc.,
a California nonprofit public benefit corporation,
its sole member/manager

By: _____
Jonathan White,
Chief Real Estate Officer

COUNTY:

COUNTY OF ALAMEDA, a political subdivision of the State of California

By: _____
Michelle Starratt, Director
Housing and Community Development Department

[SIGNATURES CONTINUE ON FOLLOWING PAGE]

CITY:

ATTEST:

CITY OF NEWARK,
a California municipal corporation

By: _____
Sheila Harrington, City Clerk

By: _____
David Benoun, City Manager

APPROVED AS TO FORM AND
LEGALITY

By: _____
Kristopher Kokotaylo, City Attorney

[SIGNATURES MUST BE NOTARIZED]

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
)
COUNTY OF _____)

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify UNDER PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Name: _____
Notary Public

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
)
COUNTY OF _____)

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify UNDER PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Name: _____
Notary Public

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
)
COUNTY OF _____)

On _____, before me, _____, Notary Public, personally appeared _____, who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify UNDER PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

_____
Name: _____
Notary Public

EXHIBIT A

LEGAL DESCRIPTION OF THE PROPERTY

Real property in the City of Newark, County of Alameda, State of California, described as follows:



Cedar Community Apartments Homekey Project Grant Acceptance & Agreements

City Council: September 22, 2022

Homekey Project Funding

City Council: September 22, 2022

Agenda

- Background- Homekey program
- Grants and funding overview
- Cedar Community Apartments- affordable housing
- Funding agreements- state and contributing partners
- Safety and Security
- Operation and development overview
- Policy & program conformance
- Next Steps and staff recommendation

1 Background – Homekey Program

Protection for low-income & homeless households

- Builds on success of Project Roomkey
- $1.9 billion in available grant funding
- Purchase/rehab existing buildings
- Convert to permanent housing

Grant Process and Amount

- Notice of funding availability- September 9, 2021
- Funds available on a first come-first served basis

City Council Actions – January 13, 2022

Application Authorization

- Allied Housing as co-applicant
- Up to $39 million
- Application submitted January 30, 2022

Assignment of Funds

- $4.5 million Housing Impact Fee Fund
- $1.5 million ARPA Recovery Plan Funds

NEWARK california

3

Homekey Grant

Cedar Community Apartments

$38.2 million

- Awarded to city on July 25, 2022
- 6th largest value award; 10th largest unit count
- Property acquisition and supportive services
- Incentives for quick lease up by March 2023
- Standard Agreement sets terms and conditions
  - Regular monitoring and reporting required

4 City Contributions

Cedar Community Apartments

$1.5 million – ARPA Recovery Plan Fund

- $1.5 million identified for affordable housing
- An approved use of ARPA funds

$4.5 million – Affordable Housing Fund

- Consistent with purpose of the Affordable Housing Fund

5 Other Funding & Service Partners

Cedar Community Apartments

Housing Authority – County of Alameda

- 60 Project Based Vouchers
  - 12 reserved for military veterans

Alameda County

- $4 million in HOME-ARP funds

Alameda County Health Care Services Agency

- Resident support programs

NEWARK california

6

Towne Place Suites - Newark

39802 Cedar Boulevard

Existing extended stay hotel

- Built in 2000, renovated in 2015
- 125 rooms (studios, 1BR, 2BR)




Balentine Dr
Balentine Dr
Fremont Chrysler Dodge Jeep Ram
Winn VW of Newark
Ultimate Staffing Services
Isla
Takeout • Delivery
Faisal Market
Balentine Plaza
Stevenson Blvd
FoodMaxx
The UPS Store
Once Upon A Child Newark
Papa John's Pizza
Takeout • Delivery
Bonchon Newark
Takeout • Delivery
Sawyer Terrace
Riley Way
Pelton Terrace
Chevron
Cedar Blvd
Cedar Blvd
Cedar Blvd
Cedar Blvd
39802 Cedar Blvd. Parking
Murieta
Imaginook
3D
Camera: 675 m 37°31'04"N 121°59'34"W

Homekey Project Partners

Cedar Community Apartments

Abode Services

- 30+ years experience as affordable housing developer and supportive services provider
- Operating partner of two Homekey sites

Allied Housing

- Development division of Abode
- Homekey Co-applicant with city

Housing for Independent People

- On-site property manager and mgmt. agent

NEWARK
california

8

Cedar Community Apartments

Conversion to affordable housing

- 124 extended stay rooms converted to residential
  - 57 studios; 38 1-BR; 29 2-BR
  - One unit for on-site manager
- Minor interior/exterior improvements
  - 7 ADA/Accessible units
  - Ground floor office/common area
  - Resident services modular building

Cedar Community Apartments

Affordable Housing Program

- 64 units for at-risk of homelessness households
- 60 units for chronically homeless households
- Permanent supportive rental housing
- Gross income <30% Area Median Income
- Term: 55-years

Homekey Program – Grant Agreement

Cedar Community Apartments

State's "Standard Agreement"

- Authorizes funding the $38.2 million grant
- Establishes the eligible uses
- Affordable rent standards- cannot exceed 30% of income eligibility level
- Deadlines and reporting requirements
- Grant disbursement requirements
- Homekey and project-specific terms and conditions

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11

City – Allied Agreements

Cedar Community Apartments

Grant award and city contributions – terms, expectations, requirements

- Loan Agreement
- Regulatory Agreement
- Promissory Note and Deed of Trust
- Subordination Agreement

Loan Agreement

Cedar Community Apartments

Affordable housing in exchange for a loan

- Loan Amount: $38.2 Homekey + $6 million city funds
- Use: property acquisition and development costs
- Term: 55-years
- Payment of prevailing wages, per Standard Agreement
- City loan funds accrue interest at 3% per year
- Annual payments of residual receipts for city loan
- Homekey loan forgiven when state's obligations satisfied
- City loan + interest due at end of term or default

Regulatory Agreement

Cedar Community Apartments

Regulates occupancy, rents, and requirements

- 124 affordable units, one on-site manager unit
- Extremely low-income rents
- Annual tenant income verification
- Annual reporting; inspections permitted with notice
- Property management and maintenance requirements
- Marketing and management plan
- Resident and social services requirements
- Insurance, transfers, defaults, indemnification

Promissory Note and Deed of Trust

Cedar Community Apartments

A promise to repay loan secured by Deed of Trust

- Promissory Note is a “residual receipts” note
- Payment required from a percentage of net proceeds
- Residual receipts are not expected in initial years until project is refinanced
- Note accrues at 3% interest on city loan
- No interest on Homekey grant; forgiven upon satisfaction of all requirements
- Secured by a Deed of Trust

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15

Subordination Agreement

Cedar Community Apartments

Establishes priority for project loans

- City Regulatory Agreement
- County Regulatory Agreement
- City Deed of Trust
- County Deed of Trust

Process for notification and default cure

Live/Work Preference

Cedar Community Apartments

Preference for Newark Live/Work Community

- Regulatory Agreement contains live/work requirement
- Cannot not violate fair housing laws
  - HUD interpretation- may not be consistent
  - HUD is county's HOME funding source
- Studies show that displacement is occurring, and live/work requirement could help
- City will continue advocacy of live/work requirement

Live/Work Preference

Cedar Community Apartments

Live/Work Procedure

- Eligible applicants are scored on housing vulnerability factors to determine greatest need; applicants with identical scores are grouped
- Applicants in each group who live or work in Newark receive preference
- Lottery within each group to establish applicant list for continued processing

Eligibility and Resident Selection

Cedar Community Apartments

Eligibility

- Extremely low income <30% AMI
  - Alameda County AMI 4-person household: $142,800
  - 30% AMI = $42,850
- Minimum income for “at-risk” units: 2X monthly rent of unit to be leased
- No minimum income for homeless units

Eligibility and Resident Selection

Cedar Community Apartments

Eligibility

- Proof of income; credit check
- Criminal background check for adult household members
  - Grounds for denial- serious felony offensives
- Complete applicant application documents
- Applications coordinated by management agent

Eligibility and Resident Selection

Cedar Community Apartments

Referrals for Homeless Households -60 units

- Referral source – County's CES
- Project Based Vouchers through HACA
  - Applicants prioritized by highest need
- CES refers applicant and application materials to CCA management agent to continue processing
- 12 units for miliary veterans; VASH program administered through Palo Alto VA

Eligibility and Resident Selection

Cedar Community Apartments

At-Risk Households -64 units

- Referral source – County's affordable housing portal and 211 housing referral list
- CCA management agent prioritize applicants by highest need based on vulnerability factors
- Lottery selection for identical scores

Community Safety and Security

Newark Police Department

Crime Analysis and Recommendations

- Misconceptions and Concerns
- Area 40, 41, 43, and 44
  - QOL Issues
    - Vehicle Theft; Burglary; Package Theft; Vehicle Abatement; Theft of Vehicle Parts;
- Abode Partnership

Community Safety and Security

Newark Police Department

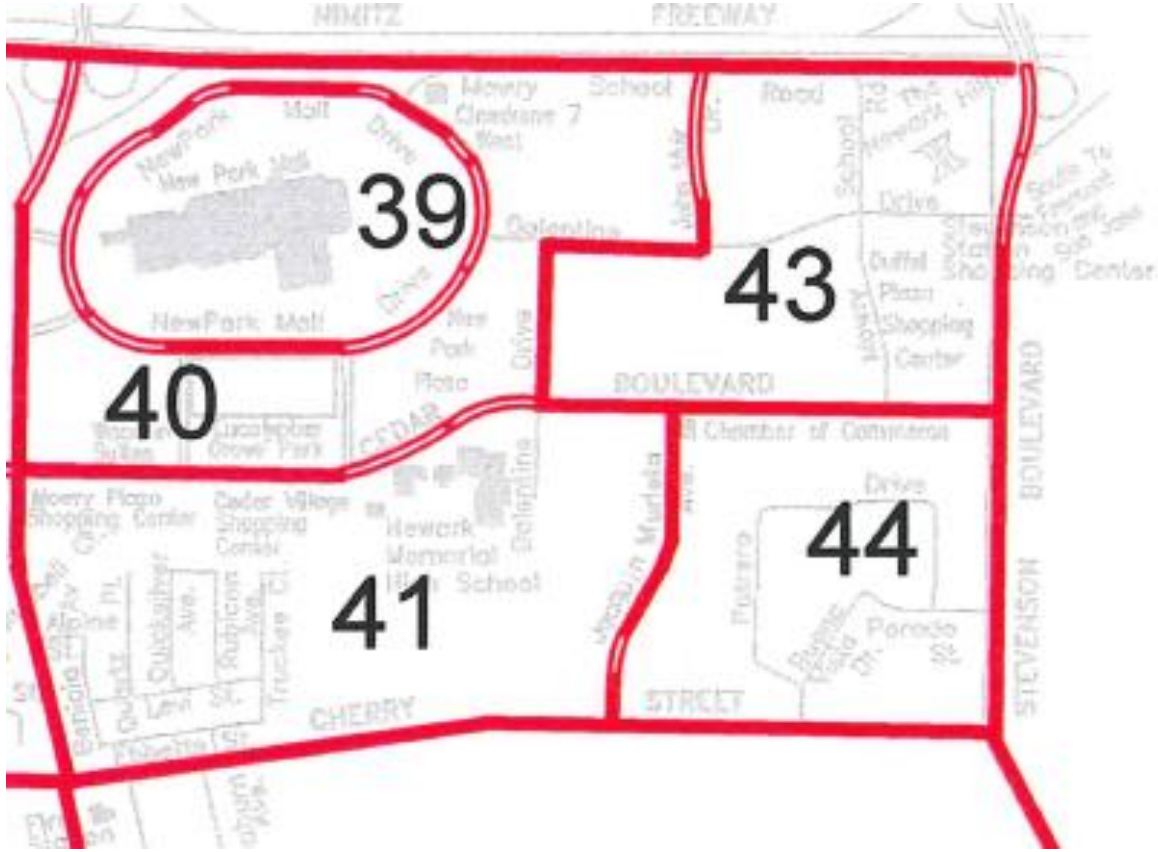
Misconceptions and Concerns

- Newark Officers
  - Impression
- Police Management
  - Resources
- Community Concerns

Community Safety and Security

Newark Police Department

Area 40, 41, 43, and 44

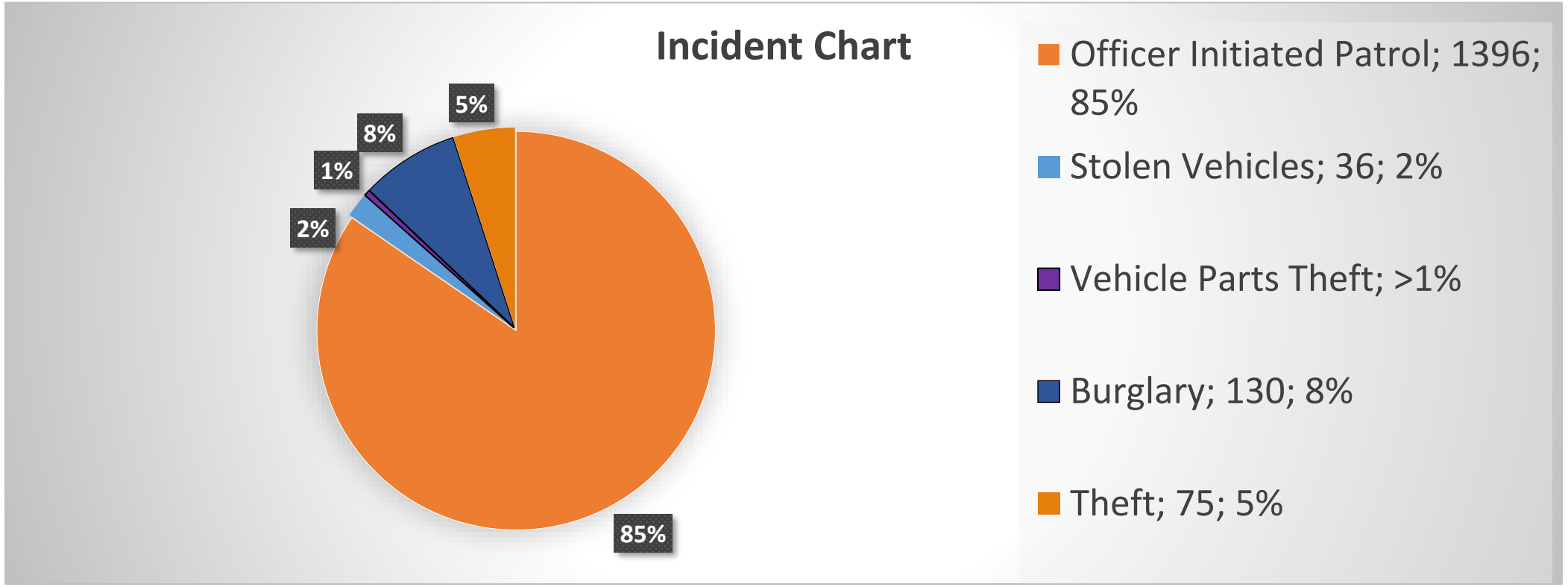


Community Safety and Security

Newark Police Department

Incident Search Results

Area is 40 or 41 or 43 or 44, Date Between 6/20/2019 and 6/20/2020

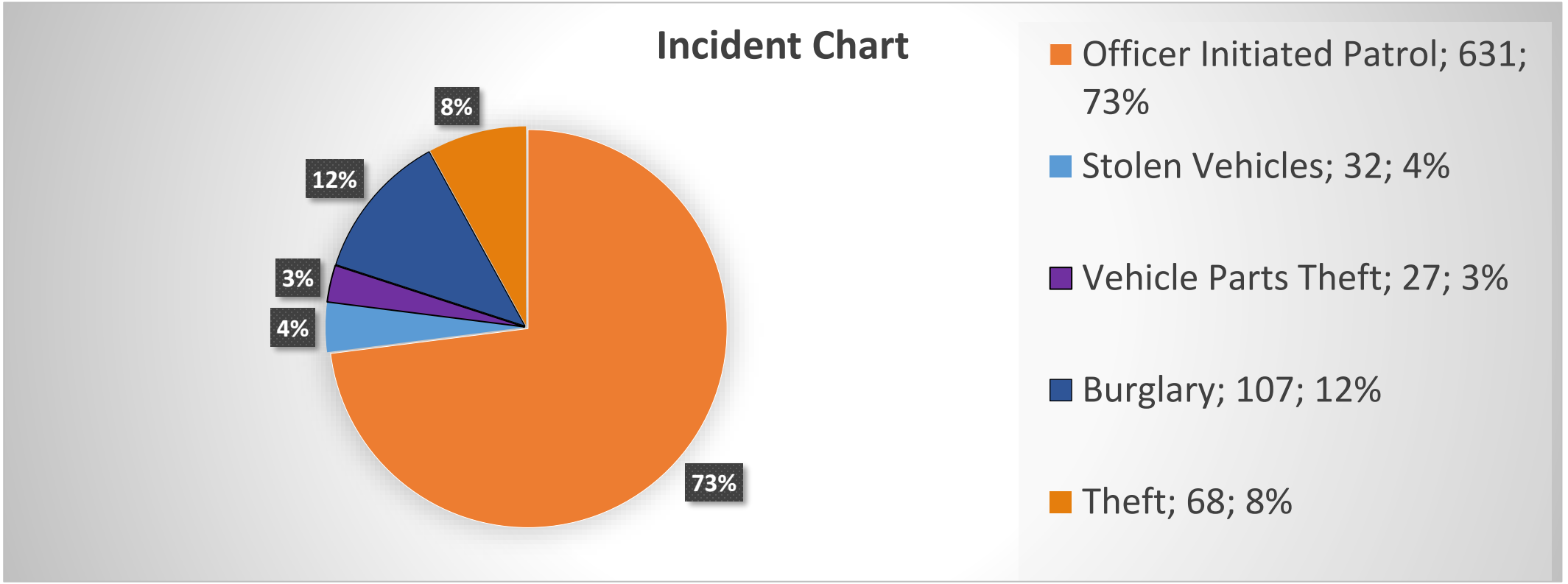


Community Safety and Security

Newark Police Department

Incident Search Results

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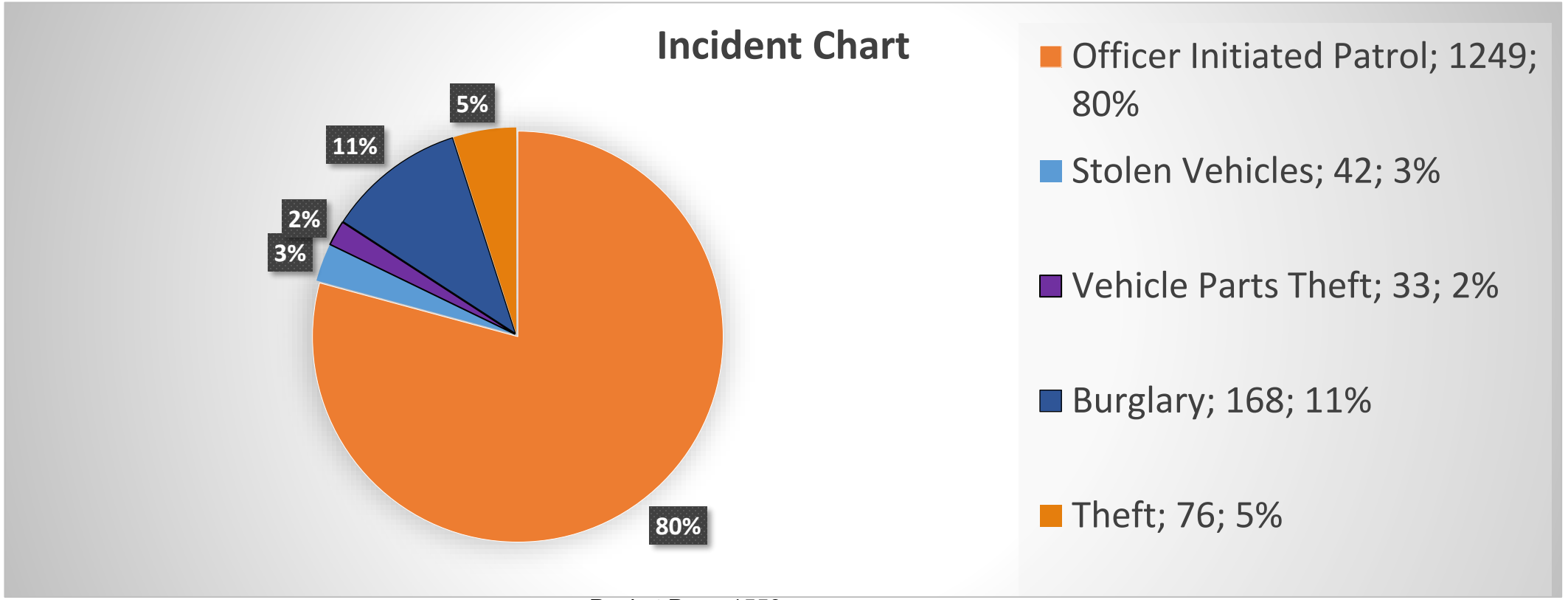


Community Safety and Security

Newark Police Department

Incident Search Results

Area is 40 or 41 or 43 or 44, Date Between 6/20/2021 and 6/20/2022



Community Safety and Security

Newark Police Department

Abode Partnership

- Police Influenced Requirements
  - Security Cooperation
  - Camera Access

Safety and Security

Cedar Community Apartments

CCA Site and Program Security

- Security fencing with controlled access
- Security cameras
- Security guard: 24 hours/day, seven days per week
- On-site live-in manager

Safety and Security

Cedar Community Apartments

Regulatory Agreement

- Employ CPTD design principals
- Review of illegal activity with Newark PD
- Implementation of a neighborhood watch program
- On-site contact to receive neighborhood complaints/concerns; prompt resolution
- City's right to enter property to investigate conditions affecting neighborhood safety and welfare
- Management agent responsible for safe operations

Site Improvements and Parking

Cedar Community Apartments

Site Improvements

- Resident services modular building
- New security fencing to match existing fencing
- New security cameras
- Bicycle parking – 100 spaces
- Accessible parking and mobility improvements
- Removal of pool; install playground and resident amenities
- Design review is required

Site Improvements and Parking

Cedar Community Apartments

Automobile Parking

- 134 existing automobile parking spaces
- Onsite improvements result in removal of 46 spaces
- 88 spaces to be provided
- Developer request for an automobile parking concession for 100% supportive, affordable housing
- Planning Commission review and recommendation to City Council

Community Engagement

Cedar Community Apartments

Community Meetings

- Virtual community meetings via Zoom
  - November 10, 2021
  - March 9, 2022

Other Engagement

- Website and FAQs
- Social media / electronic mail
- Courtesy notifications

Policy & Program Conformance

Cedar Community Apartments

General Plan – Housing Element

- Program 1: Create affordable housing w/developers
- Program 2: Support efforts to end homelessness
- Program 8: Seek funds for affordable housing

Affordable Housing Work Plan

- Site acquisition activities and funding for affordable housing development

Next Steps

Cedar Community Apartments

Property acquisition:	October 2022
Design review/parking concession:	October 2022
Marketing, advertisement, and Tenant referrals and recruitment:	October 2022 – March 2023
Interior construction and renovations:	October 2022 – November 2022
Exterior improvements:	December 2022 – March 2023
Leasing activities/resident move-in:	October 2022 – March 2023

Staff Recommendation

Cedar Community Apartments

Standard Agreement Resolution

By resolution, accept and approve a Standard Agreement with the State of California's HCD Department for a Homekey grant of $38,156,293.00

Agreements Resolution

By resolution, accept and approve a Loan Agreement and Affordable Housing Regulatory Agreement and Declaration of Restrictive Covenants between the city and Allied, and a Promissory Note and Deed of Trust

Project Team

Cedar Community Apartments

Paul Peninger, Baird +Driskell

Ken Smith, President, Board of Directors Abode Services

Louis Chicoine, CEO Abode Services

Jon White, Chief Real Estate Officer Abode Services



Thank You/ Questions

Cedar Community Apartments Homekey Project Grant Acceptance & Agreements

City Council: September 22, 2022

STAFF REPORT

Item G. 1.

DATE	09/22/2022
TO	Honorable Mayor and City Council Members
FROM	Alan L. Nagy, Mayor
SUBJECT	Adopt a resolution approving the Mayor's appointment to the Planning Commission

Debbie Otterstetter resigned from the Planning Commission effective July 31, 2022. Ms. Otterstetter's term was scheduled to expire on December 31, 2023.

The City Clerk advertised the vacancy and applications were received from Daniel Cardenas, Namit Saksena, Raju Mathew, Patricia Pippitan, and Carol Graham.

The applicants have been interviewed and Mayor Nagy will announce his selection at the City Council Meeting to fill the unexpired term through December 31, 2023.

It is recommended that the City Council adopt a resolution approving the appointment to the Planning Commission.

Attachments

Resolution

RESOLUTION NO.

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF NEWARK APPROVING THE APPOINTMENT OF _____ TO THE PLANNING COMMISSION

WHEREAS, Debbie Otterstetter, hereto appointed member of the Planning Commission, resigned her seat effective July 31, 2022; and

WHEREAS, the City Clerk advertised the vacancy and received applications from, Daniel Cardenas, Namit Saksena, Raju Mathew, Patricia Pitpitan, and Carol Graham; and

WHEREAS, the Mayor of the City of Newark has considered the applications; and

WHEREAS, the Mayor of the City of Newark has appointed _____ to said position on the Planning Commission for a term expiring December 31, 2023;

NOW, THEREFORE, BE IT RESOLVED that said appointment is hereby approved by the City Council of the City of Newark.