NOTICE OF REGULAR COUNCIL MEETING

In accordance with § 38-431.02 of the Arizona Revised Statutes of the State of Arizona, notice is hereby given to the Members of City Council and to the general public that the Mayor and Council of the City of San Luis, Arizona will hold a Regular City Council meeting at 7:00 p.m., Wednesday, March 9, 2022. The meeting will take place at the City Council Chambers, located at 1090 E. Union Street, San Luis, Arizona, 85349. The public is invited to attend the open meeting.

In accordance with the Americans with Disabilities Act (ADA) and Section 504 of the Rehabilitation Act of 1973, the City of San Luis does not discriminate on the basis of disability in the admission of or access to, or treatment of employment in its programs, activities, or services. For information regarding rights and provisions of the ADA or Section 504, or to request reasonable accommodations for participation in City programs, activities or services contact: ADA/Section 504 Coordinator, City of San Luis Human Resources Department, 1090 E. Union Street, San Luis, Arizona, 85349; (928) 341-8520.

Notice is hereby given that pursuant to A.R.S. § 1-602.A.9, subject to certain specified statutory exceptions, parents have a right to consent before the State or any of its political subdivisions make a video or audio recording of a minor child. Meetings of the City Council are audio and/or video recorded, and, as a result, proceedings in which children are present may be subject to such recordings. Parents in order to exercise their rights may either file written consent with the City Clerk to such recordings, or take personal action to ensure that their child or children are not present when a recording may be made. If a child is present at the time a recording is made, the City will assume that the rights afforded parents pursuant to A.R.S. § 1-602.A.9 have been waived.

THIS NOTICE IS GIVEN BY:

/s/ Sonia Cornelio, City Clerk

AVISO DE JUNTA REGULAR

De acuerdo con los Estatutos del Estado de Arizona A.R.S. § 38-431.02, se le informa a los miembros del Cabildo y al público en general que el Alcalde y el Cabildo, tendrán una Junta Regular a las 7:00 p.m., el día Miercoles, 9 de Marzo del 2022. La junta se llevará a cabo en la Sala del Cabildo, ubicada en el 1090 E. Union Street, San Luis, Arizona, 85349. El público está invitado a la junta.

De acuerdo con el Acta de Americanos con Discapacidades y la Sección 504 del Acta de Rehabilitación del 1973, la Ciudad de San Luis, Arizona no discrimina por causa de discapacidad la admisión y acceso a sus programas, actividades, servicios o en el trato en cuanto a empleo. Para más información referente a derechos y provisiones del Acta de Americanos con Discapacidades o Sección 504, o para solicitar adaptaciones que sean razonables para la participación en programas, actividades o servicios de la Ciudad, contactar al: Coordinador del Acta de Americanos con Discapacidades/Sección 504, Departamento de Recursos Humanos de la Ciudad de San Luis, Arizona, ubicado en el 1090 E. Union Street, San Luis, Arizona, 85349; (928) 341-8520.

Por medio de este aviso y de acuerdo con los Estatutos del Estado de Arizona A.R.S § 1-602.A.9, sujeto a ciertas excepciones reglamentarias, los padres de familia tienen el derecho de dar el consentimiento ante el Estado o cualquiera de sus subdivisiones políticas para hacer una grabación de audio o video de su hijo menor de edad. Las juntas del Cabildo se graban en audio y/o video y como resultado, el hecho de que haya menores presentes puede ser sujeto a que sean grabados. Para que los padres de familia puedan ejercer sus derechos pueden dar el consentimiento por escrito con la Secretaria de la Ciudad a tal grabación, o tomar acción personal para asegurarse que su hijo menor no esté presente cuando la grabación se lleve a cabo. Si un menor de edad está presente en el momento de la grabación, la Ciudad asumirá que los padres de familia están cediendo los derechos sobre una posible grabación de acuerdo con los Estatutos del Estado de Arizona A.R.S. § 1-602.A.9.

ESTE AVISO ES DADO POR:

/f/ Sonia Cornelio, Actuaria de la Ciudad

AMENDED AGENDA
3/8/2022
PREVIOUSLY ITEM NO. 6.C. HAS BEEN REMOVED AND RE-NUMBERED ACCORDINGLY

AGENDA
Regular Meeting
San Luis City Council
San Luis Council Chambers
1090 E. Union Street
San Luis, AZ 85349
March 9, 2022
7:00 p.m.

For the safety of the public during the COVID-19 pandemic, members of the public may attend the City Council's Regular Meeting of March 9, 2022 in person if the 6-foot distance can be maintained which is 27 people. However, members of the public may listen to the meeting's live audio stream on the City of San Luis' website https://sanluisaz.gov/listenlive. Recordings of the meetings will be available on the city's website https://sanluisaz.gov/listenlive after the meeting. Call to the Public will only be available to those attending the meeting in person.

PLEASE TAKE NOTICE THAT MEMBERS OF THE CITY COUNCIL WILL ATTEND EITHER IN PERSON, TELEPHONE, OR VIDEO CONFERENCE COMMUNICATION. THE MAYOR OR ACTING MAYOR FOR THIS MEETING MAY CHANGE THE ORDER OF THE ITEMS; IF AUTHORIZED BY LAW AND BY A MAJORITY VOTE OF A QUORUM OF CITY COUNCIL MEMBERS PRESENT, AN EXECUTIVE SESSION WILL BE HELD IMMEDIATELY FOLLOWING THE VOTE IN ACCORDANCE WITH A.R.S. §38-431.03(A) AND THE MEETING WILL BE TEMPORARILY RECESSED WHILE THE CITY COUNCIL RETIRES TO EXECUTIVE SESSION WHICH WILL NOT BE OPEN TO THE PUBLIC.

Por la seguridad del público durante la pandemia COVID-19, habrá asistencia en persona para los miembros del público en la Junta Regular del Cabildo del 9 de Marzo del 2022, si la distancia de 6 pies puede mantenerse, que es de 27 personas. Sin embargo, los miembros del público pueden escuchar el audio en vivo de la reunión transmitido en el sitio web de la Ciudad de San Luis https://sanluisaz.gov/listenlive. Las grabaciones de las reuniones estarán disponibles en el sitio web de la ciudad https://sanluisaz.gov/listenlive después de la reunión. Llamado al Publico estara disponible solo a quienes asistan a la junta en persona.

TENGA EN CUENTA QUE LOS MIEMBROS DEL CABILDO DE LA CIUDAD ASISTIRÁN EN PERSONA, TELÉFONO O COMUNICACIÓN POR VIDEO CONFERENCIA. EL ALCALDE O VICE-ALCALDE DE ESTA REUNIÓN PUEDE CAMBIAR EL ORDEN DE LOS TEMAS; SI ESTÁ AUTORIZADO POR LA LEY Y POR MAYORÍA DE VOTOS DE UN QUÓRUM DE MIEMBROS DEL CABILDO PRESENTES, SE LLEVARÁ A CABO UNA SESIÓN EJECUTIVA INMEDIATAMENTE DESPUÉS DE LA VOTACIÓN DE ACUERDO CON LOS ESTATUTOS DEL ESTADO DE ARIZONA A.R.S. §38-431.03 (A) Y LA REUNIÓN SERÁ TEMPORALMENTE RECESADA MIENTRAS EL CABILDO DE LA CIUDAD SE RETIRE A UNA SESIÓN EJECUTIVA QUE NO ESTARÁ ABIERTA AL PÚBLICO.

1. CALL TO ORDER/ROLL CALL

2. PLEDGE OF ALLEGIANCE

3. INVOCATION

4. PRESENTATION

4. A. Presentation on any and all matters regarding Children's Museum of Yuma County regarding their services and programs by Ms. Melissa Rushin Irr, Executive Director. **(Ms. Melissa Rushin Irr, Executive Director)**

5. CONSENT AGENDA

All matters are considered to be routine by the City Council and will be enacted by one motion. If discussion is desired, that item will be removed from the Consent Agenda and will be considered separately.

5. A. MINUTES OF

- Regular Council meeting held February 23, 2022

5. B. Disbursements from February 15, 2022 to February 28, 2022

Total Disbursements $1,147,531.63
(One Million, One Hundred Forty-Seven Thousand, Five Hundred Thirty-One Dollars and Sixty-Three Cents)

5. C. Discussion and possible directions to staff on any and all matters regarding the recommendation to City Council to reappoint or appoint directors to the Board of the San Luis Facilities Development Corporation for the terms that expired on July 29, 2021, and to fill a vacancy. **(Kay Marion Macuil, General Counsel for the Board and City Attorney)**

6. DISCUSSION AND POSSIBLE ACTION ITEMS:

6. A. Discussion and possible action on any and all matters regarding the award of Construction Contract for Fleet Services Building Expansion Project (New Fleet Services Shop) to Merrill Development, LLC. **(Eulogio Vera, Director of Public Works)**

6. B. Discussion and possible action on any and all matters regarding Resolution No. 2210. A resolution of the Mayor and City Council of the City of San Luis, Arizona, providing for a Call of Election for 2022 Primary and General Elections, designating the election dates and purpose, designating the deadline and location for candidates to file Nomination Petitions and designating the deadline for voter registration. **(Sonia Cornelio, City Clerk)**

6. C. Discussion and possible action on any and all matters regarding Subdivision Case No. 2021-0751F. A request by Edais Engineering Inc., on behalf of Riedel Holdings LLC, for the approval of Los Mezquites Unit 1 Final Plat; the property is located on the southeast corner of Avenue E and County 23-1/2 Street (San Luis Lane) in San Luis, Arizona. **(Fernando Villegas, Principal Planner)**

A. Staff Presentation
B. Action on Subdivision Case No. 2021-0751F

6. D. Discussion and possible action on any and all matters regarding the purchase of playground equipment for the playground expansion of PPEP Park. **(Maria A. Roldan, Acting Director of Parks and Recreation)**

7. SUMMARY OF CURRENT EVENTS

Events by Mayor, Council Members and/or City Manager pursuant to A.R.S. §38-431.02 (K).

8. CALL TO THE PUBLIC

This is the time for the public to comment. Members of the City Council may not discuss items that are not specifically identified on the agenda. Therefore, pursuant to A.R.S. §38-431.01 (H), action taken as a result of public comment will be limited to directing staff to study the matter, responding to any criticism or scheduling the matter for further consideration and decision at a later date.

9. ADJOURNMENT

PRESENTATION

Regular City Council Meeting **4. A.**

Meeting Date: 03/09/2022

Presentation Topic/Summary:

Presentation on any and all matters regarding Children's Museum of Yuma County regarding their services and programs by Ms. Melissa Rushin Irr, Executive Director. **(Ms. Melissa Rushin Irr, Executive Director)**

Attachments

Letter of Request

PP Presentation - CMYC

Children's Museum of Yuma County, Inc.
EIN# 46-2286334

03.1.2022

Executive Director
Melissa Rushin Irr

Dear City of San Luis Mayor, Council Members and Administrators,

We hope you found our video presentation inspirational and informative as we prepare to launch the Children's Museum of Yuma County into year-round service to the greater Yuma County area including San Luis. We are approaching each municipality and the County with the opportunity to partner with our existing donors and supporters in making an investment to help make this vital community resource a reality.

Board of Directors

Jovani Ford,
President
Kristen Eshaya,
Vice-President
Jennifer Kaste,
Secretary
Kevin Burge,
Treasurer

Jim Larson,
Member
Miriam Limon,
Member
Greg LaVann,
Member
Ricardo Perez,
Member

We plan to come before you in the coming weeks to respectfully and formally ask that you include the Children's Museum of Yuma County in the upcoming City of San Luis budget cycle with an investment of $10,000. An investment from the City of San Luis along with each municipality in the county will help us to bring our programming to the children and families in our region. By building on and expanding the successful programming and partnerships we've formed over the past 9 years and seeking new funding, we are positioning the organization for continued success and service for many years to come.

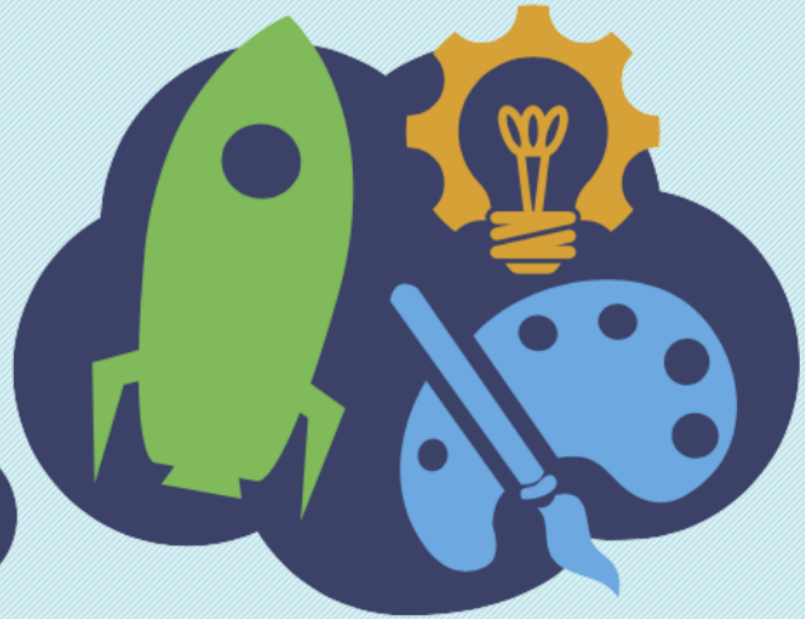
If you have any questions or concerns, please feel free to reach out to us as needed.

Sincerely,

Jovani Ford
President, Board of Directors

Greg LaVann
Board Member

Melissa Rushin Irr
Executive Director
Children's Museum of Yuma County, Inc



children's museum

YUMA COUNTY

Creating Playful Change in our Community





Our Mission

Creating playful experiences where all children learn through exploration, imagination, and creativity.

Our History…

- What is a children's museum?
- Children's Museum of Yuma County was founded in 2013
- For the past 9 years, we have:
  - Operated successful outreach events, a summer children's museum for 4 summers, virtual class kit program, and a summer camp program
  - Partnered with community members, service organizations, individual schools and districts, governmental agencies and other nonprofits and foundations to advance our mission
  - Become members of the international Association of Children's Museums and the National Informal STEM Education Network

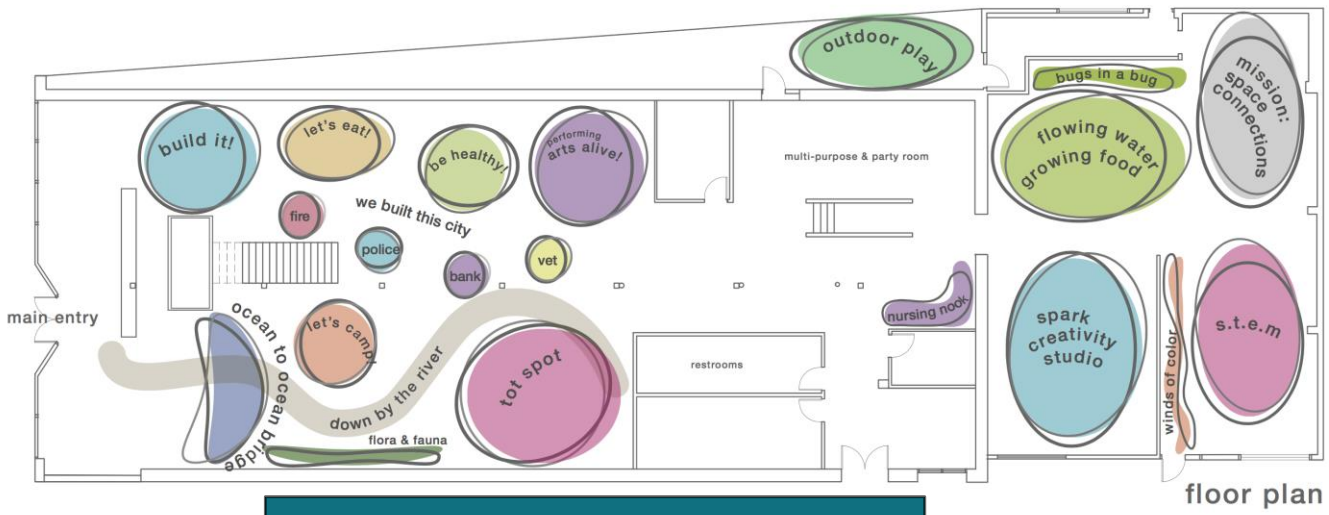
Responding to the Community During the Pandemic





- Shared online activity suggestions in early days of COVID-19 pandemic
- Developed a Museum@Home Class Kit Program Summer 2020
- Created our Spark Creative Curiosity Camps for Summer 2021

let's build a museum!



floor plan

Exhibits Featured

- Down By the River & Tot Spot
- We Built This City
- Flowing Water, Growing Food
- Bugs in a Bug
- Mission: Space Connections
- Nanotechnology
- Winds of Color
- Spark Creativity Studio



Our needs are greater than ever as we make our museum a reality…

- General operating expenses
- General program expenses
  - field trips
  - camps
  - workshops
  - pass program for economically disadvantaged families and more
- Enhancing enrichment experiences for guests, staff, and volunteers

How will we benefit the City of San Luis?

- Opportunities
  - Strengthen existing partnerships, programs, and outreach
  - Foster new partnerships, programs, and outreach
- Value
  - Supporting needs of children and families
  - Enriching lives of children & families
  - Supporting economic development

Key Funders During Our Development

Regional Center for Border Health

Sunset Community Health Center

Shay Oil Company

Gowan Company

Academy Mortgage Company

JV Smith Farms & Smith Family Foundation

Yuma County Chamber of Commerce

BLT Companies

Yuma Insurance Company

Arizona Lighting Company

Yuma Foot Care

Taylor Engineering

Dahl, Robins, & Associates

AEA Federal Credit Union

1st Bank Yuma

YRMC

Carol & Company Realtors

Partners Real Estate Group

Greater Yuma Economic Development Corporation

NexGen Yuma

Strong Beginnings

Southwest Gas

Pilkington Construction

Yuma Investment Group

Other Support

Grant Funding

Arizona Community Foundation of Yuma

Community Foundation of Southern Arizona

Arizona Community Foundation

Arizona Public Service

Officers' Spouses' Club of MCAS Yuma

Arizona Commission on the Arts

Flinn Foundation

Arizona Game and Fish Department

Service Organizations

Yuma Rotary Club

Fort Yuma Rotary Club

Sunrise Rotary Club

Rotary District 5500

Planned Revenue Streams

- Earned Revenue
  - Admissions ($6-7/person)
  - Memberships (family and corporate)
  - Camp, Workshop, Class Fees
  - Field Trip Fees
  - Facility Rentals (primarily for birthday parties and showers)
  - Retail Gift Shop Sales
- Contributed Revenue
  - Monthly Giving Program
  - Fundraising Events
  - Corporate, Organization, Individual Donations
  - Sponsorships of Events, Programs, or Exhibits
  - Grant Funding (short-term and multi-year)
  - Governmental Funding

This is so much better than school!
~~Liam G., age 12
SparkCamps 2021

Aww! I want to keep coming back next week!
~~Michael, age 6
SparkCamps 2021





Thanks for giving kids like me a place to belong.
~~Jasmine, age 11
Summer Children's Museum 2019

Contact

For Tours, Donations, or Sponsorship Opportunities

children's museum
YUMA COUNTY

Melissa Rushin Irr, Executive Director

928-920-5649

melissa@yumachildrensmuseum.com

yumachildrensmuseum.com

Donate securely at yumachildrensmuseum.com
or through Arizona Community Foundation

AGENDA ITEM REVIEW FORM

Regular City Council Meeting **5. A.**

Meeting Date: 03/09/2022

Summary

MINUTES OF

- Regular Council meeting held February 23, 2022

Attachments

2/23/2022 RCM

M I N U T E S
Regular Council Meeting
San Luis City Council
San Luis Council Chambers
1090 E. Union Street
February 23, 2022
7:00 p.m.

1. CALL TO ORDER/ROLL CALL

Mayor Gerardo Sanchez called the Regular City Council meeting to order at approximately 7:04 p.m.

PRESENT: Mayor Gerardo Sanchez
Vice Mayor Africa Luna-Carrasco
Council Member Mario Buchanan Jr.
Council Member Jose Ponce (via Zoom at approximately 7:15 p.m.)
Council Member Matias Rosales
Council Member Gloria Torres

ABSENT: Council Member Luis Cabrera

OTHERS PRESENT: Lizandro Galaviz, Acting City Manager
Kay Macuil, City Attorney
Sonia Cornelio, City Clerk
Domingo Sosa, Graphics and Media Specialist
Eulogio Vera, Director of Public Works
Jenny Torres, Economic Development Manager
Jorge Perez, Assistant Director of Public Works
Jose Guzman, Director of Planning & Zoning
Jose Luis Cisneros, Executive Assistant/Acting Assistant to Mayor and City Council & Acting Public Information Officer (PIO)
Ralph Velez, City Consultant (via Zoom)
Richard Jessup, Chief of Police
Ruben Lopez, I.T. Techinician

2. PLEDGE OF ALLEGIANCE

Council Member Gloria Torres led the Pledge of Allegiance.

3. INVOCATION

Mr. Richard Jessup, Chief of Police, led the invocation.

4. CONSENT AGENDA

4. A. MINUTES OF

- Work Session held January 2, 2022
- Regular Council meeting held February 9, 2022

4. B. DISBURSEMENTS FROM FEBRUARY 1, 2022 THROUGH FEBRUARY 14, 2022

Total Disbursements $822,557.58
(Eight Hundred Twenty-Two Thousand, Five Hundred Fifty-Seven Dollars and Fifty-Eight Cents)

MOTION: Council Member Gloria Torres/Council Member Matias Rosales to approve the Consent Agenda as presented. Motion passed unanimously.

The vote was as follows:

Mayor Gerardo Sanchez	Aye
Vice Mayor Africa Luna-Carrasco	Aye
Council Member Mario Buchanan Jr.	Aye
Council Member Jose Ponce	Aye
Council Member Matias Rosales	Aye
Council Member Gloria Torres	Aye

5. DISCUSSION AND POSSIBLE ACTION ITEMS:

5. A. Presentation followed by discussion and possible directions to staff on any and all matters regarding the Yuma Airport Authority update by Gladys Wiggins, Airport Director. (Jenny Torres, Economic Development Manager)

Ms. Jenny Torres, Economic Development Manager, introduced Ms. Gladdy Brown, Airport Director. Ms. Torres stated that Ms. Brown's presentation was regarding an update on the Airport Authority Rolle Airfield followed by discussion about the possibility of Yuma County relinquishing Bureau of Reclamation's (BOR) lease so that the Airport Authority can take over it.

Ms. Brown provided a PowerPoint presentation encompassing Rolle Airfiled, which is on file with the complete agenda packet filed at the City Clerk's Office.

Mayor Gerardo Sanchez indicated that he would like to have this item in a Work Session to be discussed in depth, the City Council agreed.

5. B. Discussion and possible action on any and all matters regarding the city granting San Luis Industrial Park a conditioned license for a currently unused access easement in the San Luis Industrial Park. This will allow San Luis Industrial Park to lease to Pastor Jose Manuel Castro and the Gethsemani Baptist Church Food Ministry to move the food distribution and storage to San Luis Industrial Park and move out of a residential neighborhood. (Kay Marion Macuil, City Attorney and Jose A. Guzman, Director of Planning and Zoning)

Ms. Kay Macuil, City Attorney, requested that this item be continued to a future meeting as she was just advised that there is more negotiations that need to be done. She added that this is a license for the San Luis Industrial Park and there are some things that need to be discussed with them.

MOTION: Council Member Matias Rosales/Vice Mayor Africa Luna-Carrasco to continue this item to the next scheduled Council meeting. Motion passed unanimously.

The vote was as follows:

Mayor Gerardo Sanchez	Aye
Vice Mayor Africa Luna-Carrasco	Aye
Council Member Mario Buchanan Jr.	Aye
Council Member Jose Ponce	Aye
Council Member Matias Rosales	Aye
Council Member Gloria Torres	Aye

5. C. Discussion and possible action on any and all matters regarding a budget transfer for the Water Division to fund emergent cost increases associated with day-to-day operations and maintenance and repair activities. (Eulogio Vera, Director of Public Works)

Mr. Eulogio Vera, Director of Public Works, explained that this item is for a transfer to their water fund – Minor Tools and Equipment account as well as the Maintenance Other account. He informed that they are short and a lot has to do with the increase and cost of water meters, water meter equipment and other unexpected maintenance needed for the water infrastructure. In addition, part of the money needed is to fund the waterline lowering that will occur as part of the 4th Avenue reconstruction project next to Comite De Bien Estar's Apartment complex. In August 2021, the City Council approved to contribute to a lowering of that waterline that is needed mainly to have safe distance coming up and down the hill. Mr. Vera added that $75,000.00 are needed in the Minor Tools and Equipment account to cover the remainder of the fical year. The shortfall is for a total amount of $336,000.00, although staff plans an amount based on the previous fiscal year, sometimes it is hard to project an exact amount that will be used for a fiscal year due to unforeseen circumstances.

Mayor Gerardo Sanchez commented that staff should do better in estimations, especially when it comes to maintenance and tools.

MOTION: Council Member Matias Rosales/Council Member Mario Buchanan Jr. to approve a budget transfer of $336,000.00 from the Water Capital Outlay-Improvement account to the Water Minor Tools/Equipment Supply account in the amount of $75,000.00 and the Water Maintenance Other account in the amount of $261,000.00 for the reasons presented by staff. Motion passed unanimously.

The vote was as follows:

Mayor Gerardo Sanchez	Aye
Vice Mayor Africa Luna-Carrasco	Aye
Council Member Mario Buchanan Jr.	Aye
Council Member Jose Ponce	Aye
Council Member Matias Rosales	Aye
Council Member Gloria Torres	Aye

5. D. Discussion and possible action on any and all matters regarding the authorization to approve BLT Concrete and BLT Asphalt for the purchase of concrete and asphalt needs for city street repairs for the remaining of the Fiscal Year 2021-2022. (Jorge Perez, Assistant Director of Public Works)

Mr. Jorge Perez, Assistant Director of Public Works, stated per the auditor's recommendation, staff is seeking approval and ratification of a few open purchase orders during the fiscal year specifically for the purchase of concrete and asphalt needs for the street repairs. Both open purchase orders have a cummulutative total of over $80,000.00. He also requested approval for opening a new purchase order for the upcoming fiscal year.

MOTION: Council Member Gloria Torres/Vice Mayor Africa Luna-Carrasco to approve and ratify Purchase Order Numbers 2022-1323 and 2022-1324 for BLT Ready Mix Concrete, LLC for the remainder of Fiscal Year 2022 and for Fiscal Year 2023 and to waive formal purchase procedures for the reason presented. Motion passed unanimously.

The vote was as follows:

Mayor Gerardo Sanchez	Aye
Vice Mayor Africa Luna-Carrasco	Aye
Council Member Mario Buchanan Jr.	Aye
Council Member Jose Ponce	Aye
Council Member Matias Rosales	Aye
Council Member Gloria Torres	Aye

6. SUMMARY OF CURRENT EVENTS

Council Member Matias Rosales reported that he and staff attended and testified at the House Senate Appropriations Committee regarding House Bill 2651.

This is the second meeting from the Appropiations Committee and it passed unanimously 9-4 for the approval of the $33 million the city has been asking for the Cesar Chavez Boulevard expansion. The next step will be presented to the House of Representatives and if approval is obtained then it has passed the Senate and the House of Representatives and then to the Governor's Office for budgeting process and approval.

7. ADJOURNMENT

MOTION: Council Member Mario Buchanan Jr./Council Member Gloria Torres to adjourn the Regular Council meeting at approximately 7:46 p.m. Motion passed unanimously.

The vote was as follows:

Mayor Gerardo Sanchez	Aye
Vice Mayor Africa Luna-Carrasco	Aye
Council Member Mario Buchanan Jr.	Aye
Council Member Jose Ponce	Aye
Council Member Matias Rosales	Aye
Council Member Gloria Torres	Aye

APPROVED:

_____
Gerardo Sanchez, Mayor

ATTEST:

_____
Sonia Cornelio, City Clerk

CERTIFICATION

I hereby certify that the foregoing minutes are a true and correct copy of the minutes of the Regular City Council meeting of the City Council of the City of San Luis, Arizona, held on February 23, 2022. I further certify that the meeting was duly called and held and that a quorum was present.

_____
Sonia Cornelio, City Clerk

AGENDA ITEM REVIEW FORM

Regular City Council Meeting **5. B.**

Meeting Date: 03/09/2022

Summary

Disbursements from February 15, 2022 to February 28, 2022
Total Disbursements $1,147,531.63
(One Million, One Hundred Forty-Seven Thousand, Five Hundred Thirty-One Dollars and Sixty-Three Cents)

Attachments

Disbursements

City of San Luis
Finance Department

COUNCIL MEETING MAR 9, 2022
Disbursement Report from 02/15/2022 TO 02/28/2022

Bank Accounts	Check Date	Amount	Schedule
Payroll Check Account	02/15/2022	$ 381,240.05	Schedule A
Accounts Payable Check Account	02/17/2022	$ 344,877.96	Schedule B
Payroll Check Account	02/22/2022	$ 313,844.39	Schedule C
Accounts Payable Check Account	02/24/2022	$ 107,569.23	Schedule D
	Total Disbursements:	**$ 1,147,531.63**	

Please contact Ms. Monica Castro prior to the meeting if additional information is needed.

Prepared by David A. Espitia: David Espitia

Verified by Director of Finance: _____

For Council approval on: _____

Mayor: _____

Council: _____

_____

_____

_____

_____

_____

RECEIVED
2022 FEB 28 P 12:07
OFFICE OF THE CITY CLERK

Pay Day Register

Pay Date Range 01/29/22 - 02/11/22

Pay Batch 202204

PSPRS FIRE DB RATE - TIER 1b	1,391.08	11,940.55
PSPRS FIRE DB RATE - TIER 2	834.60	7,163.89
PSPRS FIRE DB RATE - TIER 3	4,558.72	45,862.49
PSPRS FIRE DC RATE - TIER 3	197.11	2,190.08
PSPRS FIRE DISABILITY RATE	19.27	2,190.08
PSPRS POLICE DB RATE - TIER	3,739.31	48,879.87
PSPRS POLICE DB RATE - TIER	2,346.88	20,144.97
PSPRS POLICE DB RATE - TIER 2	989.35	8,492.23
PSPRS POLICE DB RATE - TIER 3	3,300.02	33,199.33
STANDARD LIFE ADDTNL	1,100.13	.00
TRANSWESTERN MEXICAN	97.00	.00
U.S. MEX DENTAL - EE &	574.84	.00
U.S. MEX DENTAL - EE &	164.24	.00
UNITED WAY	14.00	.00
US & MEX DENTAL= FAMILY	563.64	.00
US & MEX HEALTH = C	5,835.94	.00
US & MEX HEALTH = FAMILY	6,532.20	.00
US & MEX HEALTH = SP	1,565.74	.00
VSP - VISION CHILDREN	240.13	.00
VSP - VISION FAMILY	350.46	.00
VSP - VISION SPOUSE	97.35	.00
Net	$381,240.05	

Monica Castro

Digitally signed by: Monica Castro
DN: CN = Monica Castro email = mcastro@sanluisaz.gov C = AD
Date: 2022.02.15 18:13:01 -07'00'

BUS COMPANY AND DRIVERS	168.82	3,058.40
CLERICAL OFFICE/ LIBRARY/	289.64	120,680.58
Electrician	60.29	1,920.00
FIREFIGHTERS & DRIVERS	6,329.07	133,243.37
GARBAGE/ ASH/ REFUSE	378.24	6,051.79
Homemaker Service	19.82	865.35
MUNICIPAL/ TOWN/	97.97	5,598.36
PARKS- NOC ALL EMPLOYEES	692.04	22,324.02
POLICE OFFICERS	5,583.73	117,551.68
RECREATION- ALL EMPLOYEES/	224.90	16,415.96
SEWAGE DISPOSAL/ PLANT	701.56	20,393.94
Street or Road Construction	1,856.50	21,024.70
WATERWORKS OPERATIONS	566.26	16,318.62
Total	$18,620.12	

Direct Deposits	Amount
1st Bank Yuma	29,684.17
ACADEMY BANK	2,302.89
Bank of America	200.00
Bankcorp	200.00
Charles Sch	200.00
Chase Bank	182,488.02
chase centro	1,153.71
Federal Credit Union	44,399.94
FF CREDIT UNION	2,165.02
FIREFIGHTER FIRST CREDIT UNION	6,269.09
MIT FEDERAL CREDIT UNION	422.27
National Bank	1,835.57
Navy Federal	21,734.58
NetSpend Corporation DD	120.00
NORTH ISLAND CREDIT UNION	726.64
Sunbank	1,564.30
THE FOOTHILLS BANK	807.18
USAA FEDERAL SAVING	908.75
VANTAGE WEST	1,513.82
WASHINGTON FEDERAL	1,865.54
Wells Fargo	78,157.19
WELLS FARGO CALE	1,142.88
Total	$379,861.56

Check $1,378.49

Schedule A

City of San Luis

Payment Register

From Payment Date: 2/14/2022 - To Payment Date: 2/17/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
1BYPAYABLE - 1st BY Accounts Payable									
Check									
101128	02/16/2022	Open			Accounts Payable	BALSINO, PETER, M	$6.85		
101129	02/16/2022	Open			Accounts Payable	CHARGO PA, GURSTEL	$26.95		
101130	02/16/2022	Open			Accounts Payable	FOP/ALC	$375.00		
101131	02/16/2022	Open			Accounts Payable	GARCIA & CORNEJO, SERGIO & OSCAR	$311.10		
101132	02/16/2022	Open			Accounts Payable	SAN LUIS POLICE OFFICERS ASSOC	$345.00		
101133	02/16/2022	Open			Accounts Payable	STANDARD INSURANCE COMPANY	$9,591.05		
101134	02/16/2022	Open			Accounts Payable	SUPPORT PAYMENT CLEARINGHOUSE	$3,099.56		
101135	02/16/2022	Open			Accounts Payable	UNITED WAY OF YUMA COUNTY INC.	$14.00		
101136	02/16/2022	Open			Accounts Payable	UNITED YUMA FIRE FIGHTERS ASSOC	$91.50		
101137	02/16/2022	Open			Accounts Payable	UNITED YUMA FIRE FIGHTERS-IAFF	$1,080.00		
101138	02/17/2022	Open			Accounts Payable	ADOT MVD	$4.00		
101139	02/17/2022	Open			Accounts Payable	BOBADILLA, YADIRA	$118.80		
101140	02/17/2022	Open			Accounts Payable	BOUND TREE MEDICAL, LLC.	$83.93		
101141	02/17/2022	Open			Accounts Payable	CENTURYLINK	$104.06		
101142	02/17/2022	Open			Accounts Payable	CENTURYLINK	$5,534.71		
101143	02/17/2022	Open			Accounts Payable	DESERT VALLEY SERVICES, INC	$573.02		
101144	02/17/2022	Open			Accounts Payable	FBI-LEEDA	$150.00		
101145	02/17/2022	Open			Accounts Payable	KS STATE BANK	$236.59		
101146	02/17/2022	Open			Accounts Payable	NICKLAUS ENGINEERING	$137.50		
101147	02/17/2022	Open			Accounts Payable	OFFICE DEPOT	$408.35		
101148	02/17/2022	Open			Accounts Payable	SOUTH YUMA COUNTY LANDFILL	$34,195.21		
101149	02/17/2022	Open			Accounts Payable	THOMSON WEST PUBLISHING CO.	$1,409.76		
101150	02/17/2022	Open			Accounts Payable	TORO, JOSE	$200.00		
101151	02/17/2022	Open			Accounts Payable	ZARAGOZA, JOSE	$268.00		
101152	02/17/2022	Open			Accounts Payable	PRECISION ELECTRIC CO. INC.	$2,749.00		
101153	02/17/2022	Open			Accounts Payable	ADVANCED CALL CENTER TECHNOLOGIES LLC	$16,000.00		
101154	02/17/2022	Open			Accounts Payable	ALLUVIAL MEDIA LLC	$600.00		
101155	02/17/2022	Open			Accounts Payable	APS/CLAIM #414-1352-AH	$50.00		
101156	02/17/2022	Open			Accounts Payable	ARIZONA DEPARTMENT OF PUBLIC SAFETY	$0.69		
101157	02/17/2022	Open			Accounts Payable	ARIZONA STATE TREASURER	$36,391.18		
101158	02/17/2022	Open			Accounts Payable	AT&T MOBILITY LLC	$738.85		
101159	02/17/2022	Open			Accounts Payable	AUTOZONE STORES, INC	$1,005.04		
101160	02/17/2022	Open			Accounts Payable	AZ STATE PRISON COMPLEX - YUMA	$17.50		
101161	02/17/2022	Open			Accounts Payable	AZ STATE PRISON COMPLEX - YUMA	$17.80		
101162	02/17/2022	Open			Accounts Payable	BINGHAM EQUIPMENT CO	$119.11		
101163	02/17/2022	Open			Accounts Payable	BUNGER STEEL, INC	$49,996.00		
101164	02/17/2022	Open			Accounts Payable	D & H ELECTRIC INC.	$2,025.00		
101165	02/17/2022	Open			Accounts Payable	DAVE BANG ASSOC. INC.	$4,583.64		
101166	02/17/2022	Open			Accounts Payable	EMPIRE MACHINERY	$1,687.43		

Schedule B

City of San Luis

Payment Register

From Payment Date: 2/14/2022 - To Payment Date: 2/17/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
101167	02/17/2022	Open			Accounts Payable	HARVEY, JENNIFER	$695.00		
101168	02/17/2022	Open			Accounts Payable	HIGA, TRICIA, K	$146.68		
101169	02/17/2022	Open			Accounts Payable	LOOMIS	$930.47		
101170	02/17/2022	Open			Accounts Payable	LUNA, CYNTHIA	$100.00		
101171	02/17/2022	Open			Accounts Payable	MACHADO, IVAN & AIXIA GUTIERREZ	$500.00		
101172	02/17/2022	Open			Accounts Payable	MEDINA, JOSE, ENRIQUE	$600.00		
101173	02/17/2022	Open			Accounts Payable	NAPA AUTO PARTS	$2,244.80		
101174	02/17/2022	Open			Accounts Payable	NIEBLA, JOSE LUIS	$75.00		
101175	02/17/2022	Open			Accounts Payable	O'REILLY AUTO PARTS	$9.94		
101176	02/17/2022	Open			Accounts Payable	OFFICE DEPOT	$1,212.10		
101177	02/17/2022	Open			Accounts Payable	ORTEGA, LUZ	$75.00		
101178	02/17/2022	Open			Accounts Payable	PAWS AND TAILS FEED AND GRAIN LLC	$1,223.13		
101179	02/17/2022	Open			Accounts Payable	QUINONEZ, FRANCISCO	$200.00		
101180	02/17/2022	Open			Accounts Payable	RADIOTRONICS, INC.	$159.32		
101181	02/17/2022	Open			Accounts Payable	RODRIGUEZ, DANIEL	$1,273.84		
101182	02/17/2022	Open			Accounts Payable	SAMSARA FITNESS LLC	$3,429.03		
101183	02/17/2022	Open			Accounts Payable	US POST MASTER	$1,803.62		
101184	02/17/2022	Open			Accounts Payable	WAXIE SANITARY SUPPLY	$1,169.34		
101185	02/17/2022	Open			Accounts Payable	DESTINY SOFTWARE, INC	$3,500.00		
Type Check Totals:					58 Transactions		$193,693.45		
EFT									
903	02/17/2022	Open			Accounts Payable	APPLIED PRODUCTS GROUP LLC	$49,371.71		
904	02/17/2022	Open			Accounts Payable	ALSCO, INC	$165.31		
905	02/17/2022	Open			Accounts Payable	AMAZON.COM SALES, INC.	$309.24		
906	02/17/2022	Open			Accounts Payable	HEINFELD, MEECH & CO., P.C.	$3,400.00		
907	02/17/2022	Open			Accounts Payable	JAMES DAVEY AND ASSOCIATES INC	$15,627.50		
908	02/17/2022	Open			Accounts Payable	KTL&C, LLC.	$209.86		
909	02/17/2022	Open			Accounts Payable	ORDUNO-CROUSE, CANDICE	$1,200.00		
910	02/17/2022	Open			Accounts Payable	R&M ELECTRIC SUPPLY LLC	$240.29		
911	02/17/2022	Open			Accounts Payable	RM GRAPHICS	$52.50		
912	02/17/2022	Open			Accounts Payable	ULINE, INC.	$913.66		
913	02/17/2022	Open			Accounts Payable	WESTERN SUN SYSTEMS, INC	$126.00		
914	02/17/2022	Open			Accounts Payable	YUMA COUNTY WATER USERS ASSOCIATION	$160.00		
915	02/17/2022	Open			Accounts Payable	YUMA PRINTING COMPANY	$1,296.55		
916	02/17/2022	Open			Accounts Payable	YUMA SUN INC	$631.04		
918	02/17/2022	Open			Accounts Payable	ALSCO, INC	$628.75		
919	02/17/2022	Open			Accounts Payable	AMAZON.COM SALES, INC.	$376.95		
920	02/17/2022	Open			Accounts Payable	AMBERLY'S PLACE	$3,272.63		
921	02/17/2022	Open			Accounts Payable	CDWG	$121.10		
922	02/17/2022	Open			Accounts Payable	CSC OF YUMA	$210.12		
923	02/17/2022	Open			Accounts Payable	DESERT DOCUMENT SHREDDERS, LLC	$107.00		
924	02/17/2022	Open			Accounts Payable	DESERT VALLEY POWER SYSTEMS	$1,372.25		
925	02/17/2022	Open			Accounts Payable	DESERT WATER STORE INC	$42.05		
926	02/17/2022	Open			Accounts Payable	HILL BROTHERS CHEMICAL CO.	$12,594.66		

City of San Luis

Payment Register

From Payment Date: 2/14/2022 - To Payment Date: 2/17/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
927	02/17/2022	Open			Accounts Payable	HUMANE SOCIETY OF YUMA	$4,166.67		
928	02/17/2022	Open			Accounts Payable	KIMLEY-HORN AND ASSOCIATES INC	$44,488.79		
929	02/17/2022	Open			Accounts Payable	RM GRAPHICS	$515.08		
930	02/17/2022	Open			Accounts Payable	SMITH, RALPH E. SR.	$500.00		
931	02/17/2022	Open			Accounts Payable	SOUTHERN TIRE MART LLC	$4,764.76		
932	02/17/2022	Open			Accounts Payable	SPECTRUM BUSINESS	$175.23		
933	02/17/2022	Open			Accounts Payable	STANDARD PRINTING COMPANY, INC	$830.51		
934	02/17/2022	Open			Accounts Payable	ULINE, INC.	$779.17		
935	02/17/2022	Open			Accounts Payable	YUMA COUNTY TREASURER'S OFFICE	$204.24		
936	02/17/2022	Open			Accounts Payable	YUMA REGIONAL MEDICAL CENTER	$2,330.89		
Type EFT Totals:					33 Transactions		$151,184.51		

1BYPAYABLE - 1st BY Accounts Payable Totals

Checks	Status	Count	Transaction Amount	Reconciled Amount
	Open	58	$193,693.45	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Stopped	0	$0.00	$0.00
	Total	58	$193,693.45	$0.00

EFTs	Status	Count	Transaction Amount	Reconciled Amount
	Open	33	$151,184.51	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Total	33	$151,184.51	$0.00

All	Status	Count	Transaction Amount	Reconciled Amount
	Open	91	$344,877.96	$0.00

City of San Luis

Payment Register

From Payment Date: 2/14/2022 - To Payment Date: 2/17/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source		Payee Name	Transaction Amount	Reconciled Amount	Difference
					Reconciled	0	$0.00		$0.00	
					Voided	0	$0.00		$0.00	
					Stopped	0	$0.00		$0.00	
					Total	91	$344,877.96		$0.00	

Grand Totals:

Checks	Status	Count	Transaction Amount	Reconciled Amount
	Open	58	$193,693.45	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Stopped	0	$0.00	$0.00
	Total	58	$193,693.45	$0.00

EFTs	Status	Count	Transaction Amount	Reconciled Amount
	Open	33	$151,184.51	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Total	33	$151,184.51	$0.00

All	Status	Count	Transaction Amount	Reconciled Amount
	Open	91	$344,877.96	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Stopped	0	$0.00	$0.00
	Total	91	$344,877.96	$0.00

David Espitia

Digitally signed by: David Espitia
DN: CN = David Espitia email = despitia@sanluisaz.gov C = AD O = City of San Luis OU = Finance
Date: 2022.02.17 17:46:02 -07'00'

Pay Day Register

Pay Date Range 02/24/22 - 02/24/22
Pay Batch 202240PP

Pay Batch 202240PP Total

Employees in Pay Batch 279
Female Employees in Pay Batch 76

Hours Description	Hours	Gross
812 - ADDITIONAL PAY	.0000	423,827.00
Total	0.0000	$423,827.00

Withholdings and Deductions		Gross Base
Gross	423,827.00	
Imputed Income		
FEDERAL TAX WITHHOLDING	22,257.65	378,520.87
SOCIAL SECURITY TAX	26,277.21	423,827.00
MEDICARE	6,145.85	423,827.00
STATE WITHHOLDING	9,567.76	378,520.87
AZ STATE RETIREMENT	27,512.71	225,145.00
LONG TERM DISABILITY	428.01	225,145.00
PSPRS FIRE DB RATE - TIER 1a	3,540.20	46,277.00
PSPRS FIRE DB RATE - TIER 1b	1,456.25	12,500.00
PSPRS FIRE DB RATE - TIER 2	582.50	5,000.00
PSPRS FIRE DB RATE - TIER 3	3,516.78	35,380.00
PSPRS FIRE DC RATE - TIER 3	225.00	2,500.00
PSPRS FIRE DISABILITY RATE	22.00	2,500.00
PSPRS POLICE DB RATE - TIER	2,562.75	33,500.00
PSPRS POLICE DB RATE - TIER	1,893.13	16,250.00
PSPRS POLICE DB RATE - TIER 2	1,165.00	10,000.00
PSPRS POLICE DB RATE - TIER 3	2,829.81	28,469.00
Net	$313,844.39	

Benefits		Gross Base
AZ STATE RETIREMENT	27,512.71	225,145.00
LONG TERM DISABILITY	428.01	225,145.00
PSPRS FIRE DB NORM - TIER 1	8,593.20	58,777.00
PSPRS FIRE DB NORM - TIER 2	731.00	5,000.00
PSPRS FIRE DB NORM - TIER 3	3,516.78	35,380.00
PSPRS FIRE DCCN - TIER 3	225.00	2,500.00
PSPRS FIRE DISABILITY - TIER	22.00	2,500.00
PSPRS POLICE DB NORM - TIER	5,238.68	49,750.00
PSPRS POLICE DB NORM - TIER	1,053.00	10,000.00
PSPRS POLICE DB NORM - TIER	2,829.81	28,469.00
Total	$50,150.19	

Workers' Comp	Gross Base
Total	

Direct Deposits	Amount
Check	$313,844.39

Monica Castro

Digitally signed by: Monica Castro
DN: CN = Monica Castro email = mcastro@sanluisaz.gov C = AD
Date: 2022.02.23 13:08:33 -07'00'

Schedule C

City of San Luis

Payment Register

From Payment Date: 2/21/2022 - To Payment Date: 2/24/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
1BYPAYABLE - 1st BY Accounts Payable									
Check									
101186	02/22/2022	Open			Accounts Payable	NIEBLA, JORGE LUIS	$75.00		
101187	02/24/2022	Open			Accounts Payable	APCO INTERNATIONAL INC.	$1,455.00		
101188	02/24/2022	Open			Accounts Payable	ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY	$6,000.00		
101189	02/24/2022	Open			Accounts Payable	B&H PHOTO & ELECTRONICS CORP.	$2,009.74		
101190	02/24/2022	Open			Accounts Payable	BARROSO RODRIGUEZ, YASMELI	$1,000.00		
101191	02/24/2022	Open			Accounts Payable	BOOT BARN, INC.	$589.68		
101192	02/24/2022	Open			Accounts Payable	BOUND TREE MEDICAL, LLC.	$370.81		
101193	02/24/2022	Open			Accounts Payable	C&D DISPOSAL	$230.71		
101194	02/24/2022	Open			Accounts Payable	CENTURYLINK	$293.45		
101195	02/24/2022	Open			Accounts Payable	CHAYRA, AXEL	$265.32		
101196	02/24/2022	Open			Accounts Payable	CISNEROS, JOSE, LUIS	$59.00		
101197	02/24/2022	Open			Accounts Payable	D & H ELECTRIC INC.	$4,900.00		
101198	02/24/2022	Open			Accounts Payable	DESERT VALLEY SERVICES, INC	$276.78		
101199	02/24/2022	Open			Accounts Payable	ESSARY, JOSEPH, AARON	$965.21		
101200	02/24/2022	Open			Accounts Payable	ESTRADA, LETICIA	$41.84		
101201	02/24/2022	Open			Accounts Payable	FAST EDDIE'S RADIO CONTROLLED HOBBIES LLC	$184.25		
101202	02/24/2022	Open			Accounts Payable	FBI-LEEDA	$100.00		
101203	02/24/2022	Open			Accounts Payable	GALAVIZ, LIZANDRO	$59.00		
101204	02/24/2022	Open			Accounts Payable	GONZALEZ, SAMUEL	$150.00		
101205	02/24/2022	Open			Accounts Payable	HEMMER, ADRIAN	$40.00		
101206	02/24/2022	Open			Accounts Payable	HERRERA, EDGAR	$150.00		
101207	02/24/2022	Open			Accounts Payable	J2 ENGINEERING & ENVIR DESIGN LLC	$10,416.97		
101208	02/24/2022	Open			Accounts Payable	OFFICE DEPOT	$37.34		
101209	02/24/2022	Open			Accounts Payable	ONE SOURCE DISTRIBUTOR LLC	$1,179.92		
101210	02/24/2022	Open			Accounts Payable	PEREZ, JORGE	$150.00		
101211	02/24/2022	Open			Accounts Payable	PINNACLE MEDICAL GROUP, AZ-P.C	$1,740.00		
101212	02/24/2022	Open			Accounts Payable	POWERWERX INC	$420.71		
101213	02/24/2022	Open			Accounts Payable	QUINONEZ, FRANCISCO	$200.00		
101214	02/24/2022	Open			Accounts Payable	ROSALES, MATIAS	$59.00		
101215	02/24/2022	Open			Accounts Payable	SELECT COUNCIL ON PROGRESSIVE ENFORCEMENT	$100.00		
101216	02/24/2022	Open			Accounts Payable	SERVERSUPPLY.COM, INC	$18,438.70		
101217	02/24/2022	Open			Accounts Payable	UNITED LABORATORIES INC.	$1,709.76		
101218	02/24/2022	Open			Accounts Payable	YUMA COUNTY PUBLIC HEALTH	$195.00		
101219	02/24/2022	Open			Accounts Payable	YUMA NURSERY SUPPLY	$391.63		
101220	02/24/2022	Open			Accounts Payable	SKAGGS COMPANIES, INC	$422.32		
101221	02/24/2022	Open			Utility Management Refund	ACCURATE EXCAVATION OF ARIZONA LLC, C/O ADAM M CASTANEDA	$2,124.34		
101222	02/24/2022	Open			Utility Management Refund	ARIAS JUANA A & ARIAS SULEM Y	$169.86		
101223	02/24/2022	Open			Utility Management Refund	CERON, JACKELINE	$91.11		

Schedule D

City of San Luis

Payment Register

From Payment Date: 2/21/2022 - To Payment Date: 2/24/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
101224	02/24/2022	Open			Utility Management Refund	CHAVOLLA, MARIA & ENRIQUE ZAVALA	$266.43		
101225	02/24/2022	Open			Utility Management Refund	COMITE DE BIENESTAR INC	$19.78		
101226	02/24/2022	Open			Utility Management Refund	COMITE DE BIENESTAR INC	$18.79		
101227	02/24/2022	Open			Utility Management Refund	GARCIA, OBED & MELISSA VALENZUELA	$218.69		
101228	02/24/2022	Open			Utility Management Refund	GARCIA, CLAUDIA	$139.85		
101229	02/24/2022	Open			Utility Management Refund	GONZALEZ, ALBERTO A & VERONICA	$23.37		
101230	02/24/2022	Open			Utility Management Refund	GUZMAN, BRENDA, M	$172.51		
101231	02/24/2022	Open			Utility Management Refund	HERRERA, NADIA, I	$40.52		
101232	02/24/2022	Open			Utility Management Refund	JIMENEZ CONTRERAS, BRENDA	$184.72		
101233	02/24/2022	Open			Utility Management Refund	LILIANA EVANGELISTA & FRANCISCO CASILLAS	$98.38		
101234	02/24/2022	Open			Utility Management Refund	LIZARRAGA, JOSE F & CONCEPCION	$166.63		
101235	02/24/2022	Open			Utility Management Refund	LOYOLA, MARIA, I	$162.16		
101236	02/24/2022	Open			Utility Management Refund	MENDENHALL, NYDIA, E	$10.41		
101237	02/24/2022	Open			Utility Management Refund	MOULAND, MARK	$152.54		
101238	02/24/2022	Open			Utility Management Refund	NOMAR DEVELOPMENT INC	$29.06		
101239	02/24/2022	Open			Utility Management Refund	RAMIREZ, EVARISTO S & HILARIA	$36.50		
101240	02/24/2022	Open			Utility Management Refund	RENTERIA, YVETTE, E	$803.34		
101241	02/24/2022	Open			Utility Management Refund	RIVERA PETRONILO & CABALLOS MARTINA	$81.17		
101242	02/24/2022	Open			Utility Management Refund	RODRIGUEZ, CONSUELO	$40.00		
101243	02/24/2022	Open			Utility Management Refund	ROQUE, EMMANUEL & KAROL CARRILLO	$200.56		
101244	02/24/2022	Open			Utility Management Refund	SANCHEZ ALFREDO & LIBRA L	$201.21		
101245	02/24/2022	Open			Utility Management Refund	SANDOVAL SANTOS & GABRIELA ESPINOZA	$111.66		
101246	02/24/2022	Open			Utility Management Refund	SEPULVEDA, GERARDO & VERONICA	$0.65		
101247	02/24/2022	Open			Utility Management Refund	SOLORIO, IRIS, ZENIA	$54.90		
101248	02/24/2022	Open			Utility Management Refund	VERA, EDGAR	$15.23		
Type Check Totals:					63 Transactions		$60,311.51		

City of San Luis

Payment Register

From Payment Date: 2/21/2022 - To Payment Date: 2/24/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name	Transaction Amount	Reconciled Amount	Difference
EFT									
939	02/24/2022	Open			Accounts Payable	ALSCO, INC	$981.80		
940	02/24/2022	Open			Accounts Payable	AMAZON.COM SALES, INC.	$30.30		
941	02/24/2022	Open			Accounts Payable	CDWG	$4,998.00		
942	02/24/2022	Open			Accounts Payable	CITY OF YUMA	$20,711.81		
943	02/24/2022	Open			Accounts Payable	CORDOVA LAW, PLC	$2,200.00		
944	02/24/2022	Open			Accounts Payable	DESERT DOCUMENT SHREDDERS, LLC	$70.00		
945	02/24/2022	Open			Accounts Payable	FRUTH GROUP INC	$1,163.01		
946	02/24/2022	Open			Accounts Payable	HEINFELD, MEECH & CO., P.C.	$173.48		
947	02/24/2022	Open			Accounts Payable	HILL BROTHERS CHEMICAL CO.	$3,735.84		
948	02/24/2022	Open			Accounts Payable	HUGHES FIRE EQUIPMENT, INC.	$657.15		
949	02/24/2022	Open			Accounts Payable	LG ON SITE LLC	$1,035.44		
950	02/24/2022	Open			Accounts Payable	PACIFIC ADVANCED CIVIL ENGINEERING INC	$4,360.00		
951	02/24/2022	Open			Accounts Payable	POLAR ICE LLC	$316.08		
952	02/24/2022	Open			Accounts Payable	SOUTHWEST SANITATION SERVICES, LLC	$275.03		
953	02/24/2022	Open			Accounts Payable	SPECTRUM BUSINESS	$3,376.92		
954	02/24/2022	Open			Accounts Payable	ULINE, INC.	$147.28		
955	02/24/2022	Open			Accounts Payable	WAXIE SANITARY SUPPLY	$226.38		
956	02/24/2022	Open			Accounts Payable	YUMA TRUCK PARTS	$2,799.20		
Type EFT Totals:					18 Transactions		$47,257.72		

1BYPAYABLE - 1st BY Accounts Payable Totals

Checks	Status	Count	Transaction Amount	Reconciled Amount
	Open	63	$60,311.51	$0.00
	Reconciled	0	$0.00	$0.00
	Voided	0	$0.00	$0.00
	Stopped	0	$0.00	$0.00
	Total	63	$60,311.51	$0.00

City of San Luis

Payment Register

From Payment Date: 2/21/2022 - To Payment Date: 2/24/2022

Number	Date	Status	Void Reason	Reconciled/ Voided Date	Source	Payee Name		Transaction Amount	Reconciled Amount	Difference
				EFTs	Status	Count	Transaction Amount		Reconciled Amount	
					Open	18	$47,257.72		$0.00	
					Reconciled	0	$0.00		$0.00	
					Voided	0	$0.00		$0.00	
					Total	18	$47,257.72		$0.00	
				All	Status	Count	Transaction Amount		Reconciled Amount	
					Open	81	$107,569.23		$0.00	
					Reconciled	0	$0.00		$0.00	
					Voided	0	$0.00		$0.00	
					Stopped	0	$0.00		$0.00	
					Total	81	$107,569.23		$0.00	

Grand Totals:

Checks	Status	Count	Transaction Amount	Reconciled Amount
	Open	**63**	**$60,311.51**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**0**	**$0.00**	**$0.00**
	Stopped	**0**	**$0.00**	**$0.00**
	Total	**63**	**$60,311.51**	**$0.00**

EFTs	Status	Count	Transaction Amount	Reconciled Amount
	Open	**18**	**$47,257.72**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**0**	**$0.00**	**$0.00**
	Total	**18**	**$47,257.72**	**$0.00**

All	Status	Count	Transaction Amount	Reconciled Amount
	Open	**81**	**$107,569.23**	**$0.00**
	Reconciled	**0**	**$0.00**	**$0.00**
	Voided	**0**	**$0.00**	**$0.00**
	Stopped	**0**	**$0.00**	**$0.00**
	Total	**81**	**$107,569.23**	**$0.00**

David Espitia

Digitally signed by: David Espitia
DN: CN = David Espitia email = despitia@sanluisaz.gov C = AD O = City of San Luis OU = Finance
Date: 2022.02.24 16:13:00 -07'00'

AGENDA ITEM REVIEW FORM

Regular City Council Meeting **5. C.**

Meeting Date: 03/09/2022

Department Head: Kay Macuil, City Attorney, Attorney's Office

Submitted By: Kay Macuil, City Attorney, Attorney's Office

Action Requested: Motion

ITEM:

Discussion and possible directions to staff on any and all matters regarding the recommendation to City Council to reappoint or appoint directors to the Board of the San Luis Facilities Development Corporation for the terms that expired on July 29, 2021, and to fill a vacancy. **(Kay Marion Macuil, General Counsel for the Board and City Attorney)**

SUMMARY:

San Luis Facility Development Corporation ("SLFDC")

Creation of Corporation
The San Luis City Council created the SLFDC in 2005 under A.R.S. 10-3201 et seq., which allows any entity or person to create a non-profit corporations

Purpose: The purpose of this Corporation was to finance, own and operate one (1) or more public projects for economic development in the City of San Luis.

Status: The SLFDC owns the San Luis Regional Detention and Support Center and issued the bonds that constructed the facility. The SLFDC hires an operator to run the facility. The operator's contract will be up for renegotiation in 2024.

Eligibility for Appointment to the Board: Members' only requirement is to be an adult resident of San Luis, Arizona.

The Board: The Board Members volunteer their time as the positions are unpaid, therefore there is no fiscal impact. The terms of all the San Luis Facility Development Corporation members expired on July 29, 2021. By the function of law, the terms carry over until City Council acts. Staff recommends reappointment of all the members due to the need to have the Board experienced with the particular contracts they oversee. All current Board Members expressed their willingness to continue serving.

Due to the sad passing of John Starkey on March 19, 2020, there is one (1) vacancy. John served as the Board's Vice President from its inception. Staff recommends appointing an employee to this vacancy because federal documents often need to be signed by a Board Officer on short notice.

Mr. Eulogio Vera, Director of Public Works, expressed interest in serving on this Board and staff is recommending him to fill the vacancy.

Current Members	Suggested Appointments
Jenny Torres	Suggest Reappointment Jenny Torres
Vacancy	Suggest Appointment Eulogio Vera
Maria Gonzalez	Suggest Reappointment Maria Gonzalez
Alex Joe Harper	Suggest Reappointment Alex Joe Harper
Marco Pinzon	Suggest Reappointment Marco Pinzon

RECOMMENDATION / SUGGESTED MOTION:

I MOVE TO RENEW THE APPOINTMENTS OF JENNY TORRES, MARIA GONZALEZ, ALEX JOE HARPER, MARCO PINZON AND APPOINT EULOGIO VERA TO FILL THE VACANCY.

Fiscal Impact

IS THERE FISCAL IMPACT ASSOCIATED WITH THIS ITEM:	No
CITY/STATE/FEDERAL FUNDS:	N/A
TOTAL:	N/A
BUDGETED AMOUNT:	N/A
AVAILABLE AMOUNT TO TRANSFER:	N/A
ACCT NAME & GL#/REMAINING BALANCE BEFORE PURCHASE:	N/A

FISCAL IMPACT STATEMENT (IF THIS IS A BUDGET TRANSFER, YOU MUST ATTACH THE BUDGET ADJUSTMENT FORM):

The Board is voluntary, with no fiscal impact.

AGENDA ITEM REVIEW FORM

Regular City Council Meeting **6. A.**

Meeting Date: 03/09/2022

Department Head: Eulogio Vera, Director of Public Works, Public Works Department

Submitted By: James Einwaechter, Assistant Director of Public Works, Public Works Department

Action Requested: Motion

ITEM:

Discussion and possible action on any and all matters regarding the award of Construction Contract for Fleet Services Building Expansion Project (New Fleet Services Shop) to Merrill Development, LLC. **(Eulogio Vera, Director of Public Works)**

SUMMARY:

Staff seeks approval to award a construction contract to the low bidder for the Fleet Services Building Expansion Project.

For FY 2022, the city adopted a $796,900.00 CIP project for execution of the new Fleet Services Shop, to replace the existing inadequate facility (this is described in the invitation for bids as a "building expansion project," as one of the modules for the new building was partially completed several years ago). The approach has been that the construction of the new facility would span over two (2) fiscal years. The adopted FY 2022 project is planned for funding from the following GL accounts:

- 100-999-90015 (Fleet Services): $518,000.00
- 300-302-90015 (Water): $99,600.00
- 310-311-90015 (Wastewater): $99,600.00
- 320-321-90015 (Solid Waste): $79,700.00

The project design was completed by Thompson Design Architects in December 2021, encompassing all work required for the new facility, including shop, storage, and administrative areas, as well as exterior improvements such as paving, perimeter wall, and security gates (noting that the required perimeter chain link fence will be separately placed “in-house” by the Public Works Department’s Highway Users Division). A $117,082.00 pre-engineered metal building, that will comprise a significant portion of the new facility, has already been purchased, following Council approval in calendar year 2021, and will be provided to the

selected construction contractor for erection.

The city published an invitation for bids for the construction of the Fleet Services Building Expansion Project on January 9, 2022, with a due date for prospective bids of 3:00 PM on February 17, 2022. On February 17, staff confirmed receipt of bids from 3 interested bidders, Merrill Development LLC, Pilkington Contracting Company, Inc., and Yuma Valley Contractor, Inc. While all three (3) bids were responsive to the city's requirements, staff's evaluation of bids confirmed that Merrill Development, LLC submitted the lowest responsive bid in the total amount of $2,638,718.00 (base bid of $2,243,000.00 plus three alternate bid items). All bids were considerably higher than our original estimates for the project, noting that keen competition for labor and substantial cost growth for labor, materials and equipment, fuel, and transportation have increased dramatically since planning and design for the project began and are likely to continue to increase, making it advantageous for us to award a construction contract now. Even though the low bid of $2,638,718.00 (combined with the $49,996.00 final payment in current year funds that was paid to Bunger Steel in February 2022 for purchase of the required pre-engineered metal building, along with architect fees remaining to be paid this fiscal year) is higher than the $796,900.00 available in the city's adopted FY 2022 budget, the Public Works Department recommends council approval to award the contract to Merrill Development LLC at full project scope, noting that construction will commence on/about March 21, 2022, and will take between 12 and 15 months to complete. If the contract award is approved by the council, we anticipate that $996,900 of the $2,638,718.00 could be expended during fiscal year 2022, causing a shortfall in the allocated budget amount for this year of $200,000. We have budget available from projects that are not completed to cover this shortfall. Appropriately we also need to include in FY 2023 budget the portion of the project that will not be completed this year.

RECOMMENDATION / SUGGESTED MOTION:

I MOVE TO APPROVE THE AWARD OF A CONSTRUCTION CONTRACT FOR THE FLEET SERVICES BUILDING EXPANSION PROJECT TO MERRILL DEVELOPMENT LLC IN THE AMOUNT OF $2,638,718.00, AND APPROVE BUDGET TRANSFERS AS STATED IN THIS FISCAL IMPACT.

Fiscal Impact

IS THERE FISCAL IMPACT ASSOCIATED WITH THIS ITEM:	YES
CITY/STATE/FEDERAL FUNDS:	CITY-CIP
TOTAL:	$996,900
BUDGETED AMOUNT:	$796,900
AVAILABLE AMOUNT TO TRANSFER:	See fiscal impact statement

ACCT NAME & GL#/REMAINING BALANCE BEFORE PURCHASE: See fiscal impact statement

FISCAL IMPACT STATEMENT (IF THIS IS A BUDGET TRANSFER, YOU MUST ATTACH THE BUDGET ADJUSTMENT FORM):

This is an approved CIP project in the city's adopted FY 2022 budget. We budgeted $796,900, which is $200,000 short of the $996,900,000 estimated costs for this year. We have budget available in the following accountS to cover the shortfall:

100-999-90015 (City hall expansion) $130,000 No budget transfer required, capital project will be swapped
300-302-90000 (Vehicles that will not arrive this year due to supply issues) $25,000 Budget transfer to account 300-302-90015
310-311-90015 .350 (New Shop Storage, delayed due to expansion of WW plant) $25,000 Budget transfer to account 310-311-90015
320-321-90000 (Solid Waste Truck, will not arrive due to supply chain issues $20,000.00 Budget transfer to account 320-321-900015

Proceeding in this manner will require authority to fund the remaining amount for this project in FY 2023.

Attachments

Publication of Request for Bids
Project Design Extract
Project Manual
Bid Tabulation
Bid Analysis - Recommendation
Proposed Contract

PUBLIC NOTICES
To place your ad, call (928) 539-6813 • Mon-Fri 8-5 • or email: legals@yumasun.com YumaSun

Bid Proposals

Bid Proposals

REQUEST FOR PROPOSALS
CITY OF SAN LUIS, ARIZONA
FLEET SERVICES BUILDING EXPANSION PROJECT

NOTICE IS HEREBY GIVEN THAT sealed bids will be received in the Office of the City Clerk, City Hall, 1090 E. Union Street, City of San Luis, Arizona until 3:00 P.M. (M.S.T.) on **Thursday, February 17, 2022 for furnishing all labor, materials, equipment, tools and performing** all services required for the construction of the **City of San Luis - New Fleet Services Building Expansion** and work incidental thereto. Bids will then be publicly opened and read aloud. Each Bid should be submitted on the Bid Form provided with the Project Manual and be accompanied by a certified or cashiers check or bid bond in the amount of ten (10%) percent of the total amount of the bid.

The proposed work is located within the limits of the City of San Luis, Arizona. The work consists of, but is not limited to, a new approximately1,500 square foot office building, remodel of an existing approximately 2,000 square foot pre-engineered metal building structure, and erection and installation of a new pre-engineered metal building. The pre-engineered metal buildings (new and existing) are provided by the owner. Work will be performed per specifications in the Contract Documents and Project Plans.

The project shall be complete and in place within 450 calendar days from the date of Notice to Proceed.

Plans, specifications and contract documents may be obtained via digital download by contacting the office of the Architect at **rfp@thompsonarch.com**

Bid documents shall also be available to bidding parties at the following location:
Yuma Southwest Contractors Assoc.
350 S 16th Street
Yuma, AZ 85364
(928) 539-9035

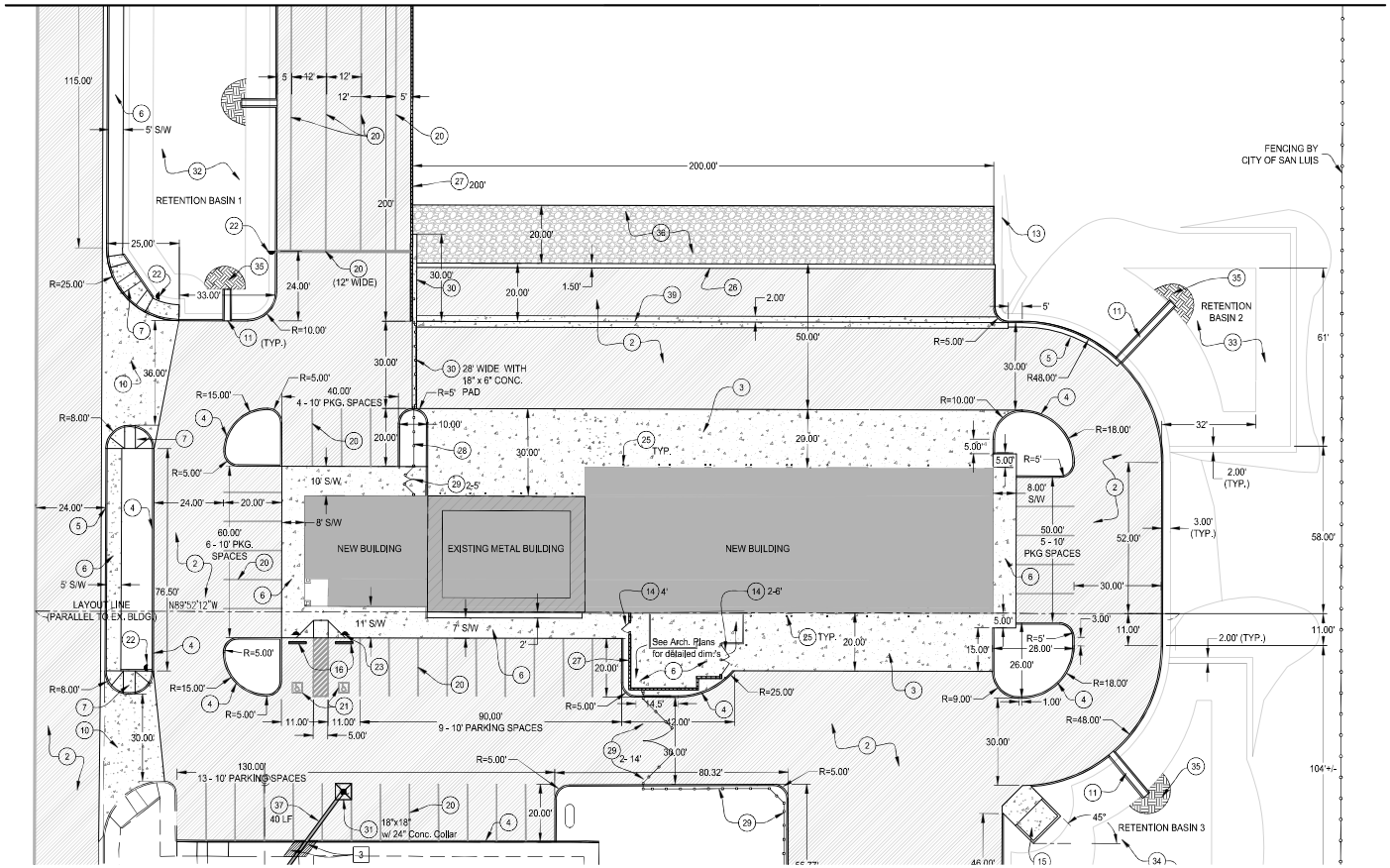
All bids must be in a sealed envelope and plainly marked: "CITY OF SAN LUIS NEW FLEET SERVICES BUILDING EXPANSION."

The City of San Luis reserves the right to cancel this procurement, and/or to reject any or all bids, and/or to waive any informality in any bid. No bidder may withdraw his bid for a period of thirty (30) days after the date set for the bid opening thereof:

CITY OF SAN LUIS, ARIZONA

Yuma Sun: January 9, 2022 - 63466

Yuma Sun
Sunday 1/9/2022
80



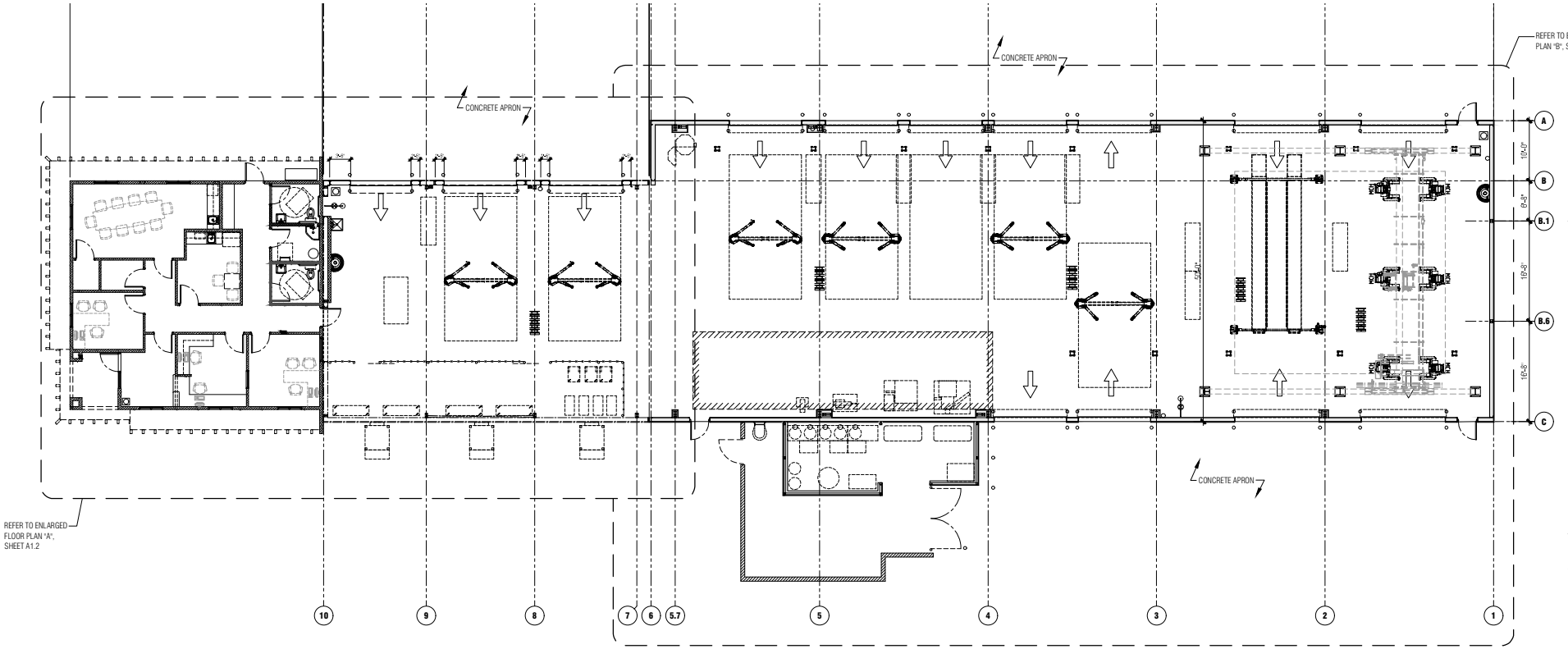
REMOVAL NOTES	
1	REMOVE EXISTING SPILLWAY
2	SAW CUT 1'-0" OF EXISTING PAVEMENT, REMOVE AND MATCH
3	REMOVE AND REPLACE SIDEWALK AS NEEDED

CONSTRUCTION NOTES	
1	GRADING FOR PAVEMENT
2	PAVEMENT STRUCTURAL SECTION NO. 1 (2-1/2" AC/6" ABC)
3	PAVEMENT STRUCTURAL SECTION NO. 2 (6" CONCRETE)
4	6" VERTICAL CURB (CITY OF YUMA STD. 3-075)
5	VERTICAL CURB AND GUTTER (CITY OF YUMA STD. 3-060)
6	SIDEWALK (CITY OF YUMA STD. NO. 3-135)
7	SIDEWALK RAMP (CITY OF YUMA STD. NO. 3-145)
10	CONCRETE DRIVEWAY ENTRANCE (CITY OF YUMA STD. NO. 3-120)
11	2' WIDE SPILLWAY (DETAIL 1, C-5.0)
13	8' HIGH CHAINLINK FENCING (CITY OF YUMA STD. 1-035)
14	CHAINLINK GATE FENCING GATE SIZE AS NOTED
15	TRASH ENCLOSURE (CITY OF YUMA STD. 1-005)
16	CONCRETE PARKING BUMPER
20	4" SOLID WHITE THERMOPLASTIC STRIPE (4SW)
21	HANDICAP PAVEMENT MARKING (DETAIL 2, C-5.0)
22	STOP SIGN MUTCD R1-1
23	HANDICAP PARKING SIGN AND VAN ACCESSIBLE SIGN (AZDOT R-7-8AZ)
25	6" STEEL PIPE BOLLARD (DETAIL 3, C-5.0)
26	RIBBON CURB - 18" WIDE (YUMA CO. STD. NO. 3-160)
27	8' HIGH CMU WALL (CITY OF YUMA STD. NO. 1-010) (DETAIL 4, C-5.0)
28	8' HIGH STEEL TUBE FENCING (CITY OF YUMA STD. NO. 1-040)
29	8' HIGH STEEL TUBE GATE TYPE AND SIZE AS NOTED
30	MOTORIZED SLIDING GATE WITH CONCRETE PAD (DETAIL 5, C-5.0)
31	CATCH BASIN (CITY OF YUMA STD. NO. 11-005)
32	RETENTION BASIN 1 (EXCAVATION AND GRADING)
33	RETENTION BASIN 2 (EXCAVATION AND GRADING)
34	RETENTION BASIN 3 (EXCAVATION AND GRADING)
35	ROCK RIPRAP 3" TO 9" RIVER RUN ROCK, 12" THICK X 6' RADIUS, TYP
36	4" ABC PAVING - COMPACT TO 100% OF ASTM D698

JDA
JAMES DAVEY AND ASSOCIATES
CONSULTING CIVIL ENGINEERS
1025 W. 24TH STREET, SUITE 2 YUMA, AZ 85364
PHONE: (928) 782-7926 WWW.JDACIVIL.COM

FLEET MAINTENANCE BUILDING EXPANSION FOR THE CITY OF SAN LUIS
-
SAN LUIS, ARIZONA

thompson design architects pc



OVERALL FLOOR PLAN

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

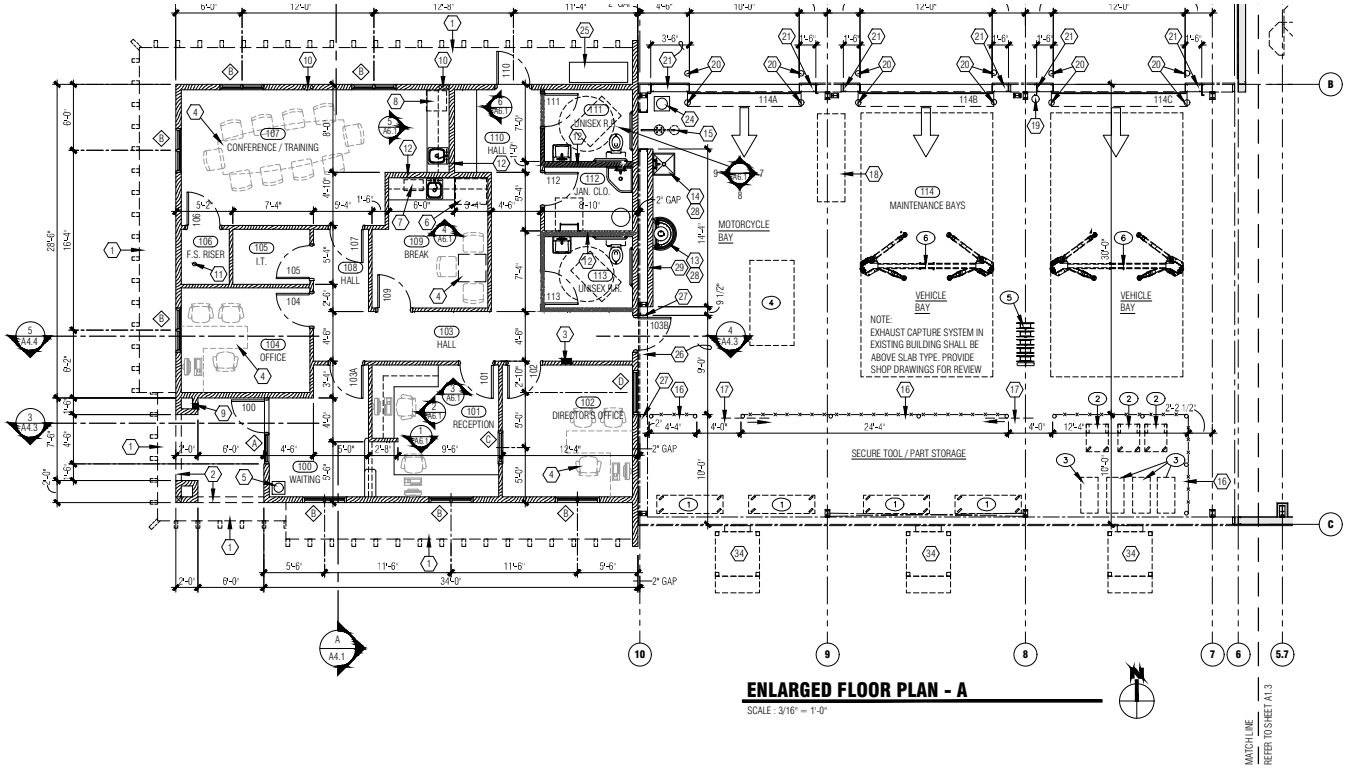
FLEET MAINTENANCE BUILDING EXPANSION FOR THE CITY OF SAN LUIS

SAN LUIS, ARIZONA

thompson design architects
410 west 16th street
yuma, arizona 85364
(o) (928) 343-1994

REGISTERED ARCHITECT
CERTIFICATE #
45040
CHRISTOPHER THOMPSON
ARIZONA, USA

Expires 9/30/2024



ENLARGED FLOOR PLAN - A

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

- 8 BENDPAK 2 POST LIFT - 15,000 LB XPR-15CL
- 9 BENDPAK 4 POST LIFT - 27,000 LB HDS-27X
- 10 STRETIL KONI LIFT - MOBILE
- 11 CRAFTSMAN DRILL PRESS
- 12 AMMCO BRAKE LATHE - MODEL 4000B
- 13 COATS WHEEL BALANCER MODEL #1025S
- 14 COATS TIRE CHANGER MODEL #80700XAH3
- 15 RANGER PROD, SPRAY WASH CAB MODEL#RS-750-D-601
- 16 10 HP AIR COMPRESSOR
- 17 5 HP AIR COMPRESSOR
- 18 DRUM CONTAINMENT PALLET (2 DRUM) - NEW PIG 2 DRUM (QTY. 3)
- 19 PALLET RAMP - NEW PIG DRUM PALLET RAMP (QTY. 3)
- 20 BULK OIL TANK W/ PNEUMATIC PUMP
- 21 USED OIL TANK
- 22 PNEUMATIC FLUID PUMP (QTY. 5) WITH WALL MOUNT KIT
- 23 7.5 TON CAPACITY BRIDGE CRANE - R & M MATERIALS HANDLING

DENOTES EXISTING EQUIPMENT - CONTRACTOR TO ASSIST THE CITY OF SAN LUIS IN RELOCATING AND INSTALLING AT THE NEW FACILITY

DENOTES NEW EQUIPMENT PROCURED BY THE CITY OF SAN LUIS AND INSTALLED BY CONTRACTOR

NOTE:
REFER TO MECHANICAL DRAWINGS FOR EXHAUST CAPTURE SYSTEM PERFORMANCE SPEC.

KEYNOTES

SOME MAY NOT APPLY

1. EDGE OF ROOF, ABOVE
2. EDGE OF SOFFIT, ABOVE
3. SEMI-RECESSED FIRE EXTINGUISHER CABINET W/ MINIMUM 2A: 10BC FIRE EXTINGUISHER - MOUNT NOT HIGHER THAN 5'-0" A.F.F. - PROVIDE APPROVED "FIRE EXTINGUISHER" SIGNAGE ABOVE EACH LOCATION
4. FURNISHINGS - BY OWNER
5. OWNER PROVIDED WATER DISPENSER
6. REFRIGERATOR / FREEZER - BY OWNER
7. MICROWAVE OVEN IN CABINET ABOVE - BY OWNER
8. UNDER-COUNTER REFRIGERATOR - BY OWNER
9. KNOX BOX
10. ROOF DRAIN AND OVERFLOW LEADERS - RUN CONCEALED IN WALL - DAYLIGHT AT 12" ABOVE EXTERIOR GRADE
11. FIRE SPRINKLER RISER - REFER TO FIRE PROTECTION PLANS
12. 6" PLUMBING WALL - 2 x 6 WOOD STUDS AT 24" O.C. W/ 5/8" GYP. BOARD BOTH SIDES - PROVIDE WATER RESISTANT GYP. BOARD ON BOTTOM 4'-0" OF WALL
13. SEMI-CIRCULAR HAND WASH FOUNTAIN - REFER TO PLUMBING DRAWINGS
14. SERVICE SINK - REFER TO PLUMBING DRAWINGS
15. EMERGENCY EYE WASH AND SHOWER - REFER TO PLUMBING DRAWINGS
16. 12' TALL CHAIN LINK FENCE - ANCHOR POSTS AT 8'-0" O.C. MAX. TO EXISTING FLOOR SLAB
17. 4' WIDE x 8' TALL ROLLING CHAIN-LINK GATE
18. WORK BENCH BY OWNER
19. WALL MOUNTED FIRE EXTINGUISHER - MINIMUM 2A: 10BC FIRE EXTINGUISHER - MOUNT NOT HIGHER THAN 5'-0" A.F.F. - PROVIDE APPROVED "FIRE EXTINGUISHER" SIGNAGE ABOVE EACH LOCATION
20. 6" DIA. X 4' HIGH PIPE STEEL BOLLARD - FILL WITH CONCRETE - PRIME AND PAINT YELLOW
21. FRAME IN EXISTING WALL OPENINGS TO CREATE NEW OPENINGS FOR OVERHEAD DOORS - REFER TO STRUCTURAL DRAWINGS
22. IN-GROUND EXHAUST CAPTURE SYSTEM - REFER TO MECHANICAL DRAWINGS BELOW-SLAB DUCTS SHALL BE RATED FOR HEAVY VEHICLE LOADS - DUCT RUNS SHALL BE COORDINATED WITH STRUCTURAL FOUNDATION DESIGN - PROVIDE SHOP DRAWINGS FOR REVIEW
23. NOT USED
24. IN-LINE EXHAUST FAN W/ VERTICAL DUCT UP THROUGH ROOF - PROVIDE WEATHER-TIGHT PENETRATION AND HOOD
25. SERVICE ENTRANCE SECTION - REFER TO ELECTRICAL DRAWINGS
26. CUT AND REMOVE 9'-0" WIDE x 7'-2" HIGH PORTION OF EXISTING METAL BUILDING SIDING PANELS - CUT AND REMOVE 9'-0" LENGTH OF LOWEST WALL GIRT - PROVIDE CONTINUOUS METAL TRIM TO COVER CUT EDGE OF WALL PANELS
27. INSTALL NEW "C" JAMBS - REFER TO STRUCTURAL DRAWINGS
28. SAW-CUT EXISTING CONCRETE SLAB AS NECESSARY TO CONNECT TO NEW WASTE LINE - UPON COMPLETION AND INSPECTION OF PLUMBING WORK, FILL WITH CLEAN SAND AND COMPACT - POUR NEW SLAB PATCH TO MATCH EXISTING THICKNESS AND PLANE

ROOM FINISH SCHEDULE

ROOM NUMBER	ROOM NAME	FLOOR FINISH	FLOOR BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING FINISH	CEILING HEIGHT	REMARKS
100	WAITING	V.C.T.	R.B.	G.W.B.	G.W.B.	G.W.B.	G.W.B.	G.W.B. A.C.T. 22	9'-0"	
101	RECEPTION	V.C.T.	R.B.	G.W.B.	G.W.B.	G.W.B.	G.W.B.	G.W.B. A.C.T. 22	9'-0"	
102	DIRECTOR'S OFFICE	V.C.T.	R.B.	G.W.B.	G.W.B.	G.W.B.	G.W.B.	A.C.T. 22	9'-0"	
103	HALL	V.C.T.	R.B.	G.W.B.	G.W.B.	G.W.B.	G.W.B.	A.C.T. 22	9'-0"	
104	OFFICE	V.C.T.	R.B.	G.W.B.	G.W.B.	G.W.B.	G.W.B.	A.C.T. 22	9'-0"	
105	I.T.	V.C.T.	R.B.	G.W.B.	G.W.B.	G.W.B.	G.W.B.	G.W.B.	9'-0"	
106	FIRE SPRINKLER RISER	S.C.	R.B.	G.W.B.	G.W.B.	G.W.B.	G.W.B.	G.W.B.	11'-0"	

ROOM FINISH ABBREVIATIONS

FLOORS:

VINYL COMPOSITION TILE
S.V. SHEET VINYL WITH 6" TALL INTEGRAL BASE
S.C. SEALED CONCRETE
E.C.T. EXISTING CONCRETE - CLEAN AND SEAL
S.C.S.F. SEALED CONCRETE - SMOOTH FINISH

BASE:

R.B. 4" TALL RUBBER BASE

REMARKS:
1. INSTALL WATER RESISTANT GYP. BOARD UP TO 4' HIGH ON PLUMBING WALLS
2. 4'-0" WIDE x 4'-0" HIGH F.R.P. WAINSCOT ON BOTH WALL SURFACES ADJACENT TO UTILITY / MOP SINK

GENERAL NOTES:
A. REFER TO INTERIOR ELEVATIONS FOR ADDITIONAL FINISH INFORMATION
B. REFER TO REFLECTED CEILING FOR ADDITIONAL FINISH INFORMATION
C. AT ALL TRANSITIONS OF FLOORING TYPES PROVIDE

WALL TYPES

(TYPICAL UNLESS NOTED OTHERMISE ON PLANS)

TYPICAL PERIMETER WALLS (U.N.O.):
2'x 6" WOOD STUDS AT 16" O.C. - TREATED SILL PLATE ON FOAM SEAL PAD ON 4" TALL CONCRETE CURB - R-19 BATT INSULATION BETWEEN STUDS - 5/8" GYP BOARD INTERIOR SIDE - 2 COAT STUCCO SYSTEM W/ ACRYLIC FINISH, OVER EXPANDED METAL LATH, OVER TYVEK COMMERCIALWRAP (OR EQUAL) BARRIER, OVER 1" THICK RIGID INSULATION, OVER 1/2" PLYWOOD SHEATHING - REFER TO STRUCTURAL DRAWINGS

FLEET MAINTENANCE BUILDING EXPANSION FOR THE CITY OF SAN LUIS
-
SAN LUIS, ARIZONA

thompson design architects

REGISTERED ARCHITECT CERTIFICATE NO. 40040 CHRISTOPHER THOMPSON

PROJECT MANUAL

THOMPSON DESIGN ARCHITECTS, PC

CITY OF SAN LUIS

FLEET MAINTENANCE BUILDING EXPANSION

JANUARY 2022



CITY OF SAN LUIS
FLEET MAINTENANCE BUILDING EXPANSION

INSTRUCTIONS TO BIDDERS

To be considered, Bids must be made in accordance with these instructions to Bidders.

DOCUMENTS:

Complete set of Bid Documents have been delivered from the Architect via email. Any Addendums issued by the Architect shall be sent directly to all plan holders.

EXAMINATION:

Before submitting a Bid, bidders shall carefully examine the Plans and Specifications and Related Documents, visit the site of the Work and fully inform themselves as to all existing conditions and limitations, and shall include in the Bid a sum to cover the cost of all items included in the Contract, which such bidder might have fully informed himself prior to the bidding.

INTERPRETATIONS, ADDENDA:

A. Should a bidder find discrepancies, inconsistencies or obscurities in, omissions from, the Drawings and Specifications and Related Documents, or should he/she be in doubt as to their meaning, he/she shall at once notify the Architect, who will send a written Addendum to all bidders. Any such item not brought to the Architect's attention during the bidding period shall be done in accordance with the Architect's interpretation for the good of the Work in accordance with the intent and meaning of the Contract Documents. Neither Owner nor Architect will be responsible for oral instructions or information. Questions shall be submitted via email to the office of the Architect up to 7 days prior to the bid date. Questions received after that period may be reviewed but may not be answered. Email questions to: rfp@thompsonarch.com

B. Any Addenda issued by the Architect during the time of bidding in the Bid, and in closing of a Contract, they will become part thereof. Acknowledge receipt of all Addenda on the Bid form in the space provided.

SUBSTITUTION OF MATERIALS:

Materials other than those specifically specified must be received by the Architect no later than (7) days prior to the bid date and submitted on Substitution Request Form contained herein.

A. When a specific manufacturer, trade name or material is specified, or indicated, it is to establish a standard of quality and shall not be considered as limiting competition. Materials found acceptable for bidding will be approved by a duly authorized Addendum issued by the Architect.

B. Submittals for approval of substitute materials shall contain sufficient information, descriptive brochures, drawings, samples or other data necessary to provide direct comparison to the specified materials. Each submittal shall be well marked and identified as to types and kind of the items being submitted for approval. It is the sole responsibility of the Bidder to submit complete descriptive and technical information to the Architect so the Architect can make proper appraisal. Lack of proper information will be sufficient cause for rejection. Reference to catalogs that the Architect may or may not have will not be acceptable.

C. It is the Contractor's responsibility to confirm and correlate all quantities and dimensions and coordinate with all trades whose work may be affected by the requested substitution.

PRE-BID CONFERENCE: **A Pre-Bid Meeting and Site Inspection is scheduled for January 27, 2022 at 10am MST at the project site.** Failure to visit the site prior to bid date shall not release the bidding contractor of any responsibility. Thereafter the bid documents shall be assumed clear by the bidder. Unless followed up in writing, all verbal authorizations or acknowledgments by anyone present shall not be binding.

BIDS:

A. Bids must be made upon the "BID FORM" provided in these specifications, all blank spaces filled, the signature shall be in longhand, and the completed form shall be without alterations or erasures. All amounts must be in words as well as in figures. Any differences in words and figures, the amount in words shall govern. The form must be executed in either ink or typewritten. Where the bidder is a corporation, Bid must be signed by the legal names of the corporation followed by the name of state of incorporation, and legal signatures of an officer authorized to bind the corporation to a Contract. Bids which are incomplete, incorrect or non-conforming insofar as specified above may not be entitled to consideration.

B. **Bids shall be delivered to the Office of the City Clerk, City Hall, 1090 E. Union Street, City of San Luis, Arizona until 3:00 P.M. (M.S.T.) on Thursday, February 17, 2022**, in an enclosed opaque sealed envelope bearing on the outside, the name of the Bidder, his address, and the name of the Project for which the bid is submitted. Also, to be included in the envelope shall be:

1. Certified Performance Bond.
2. Certified Payment Bond.

Qualified Bids will not be accepted.

C. The Contractor shall note that the Project must be completed within a specified construction time limit.

D. All bids shall remain firm for the duration of the work after the date of bid opening and Contractor shall be prepared to begin construction and pre-ordering of all long lead immediately after signing of Construction Contract and receipt of the Notice to Proceed.

E. A Bidder may modify or withdraw this bid at any time before bid opening if the modification or withdrawal is received before the time and date set for bid opening at the location designated in the advertisement for bids for receipt of bids. No Bid may be modified or withdrawn after the bid opening except where the award of the Contract has been delayed thirty-one (31) days.

F. The following will be taken into consideration for the award of the Contract in the interests of the COSL and the community it serves.

1. Base Bid.
2. Performance history of past projects.
3. Current License held and substantiated complaints.

G. The Owner will determine at his own discretion whether a bidder is qualified and award the Contract in the **"best interest of COSL"**. The Owner also reserves the right to reject any or all Bids to waive formalities and irregularities.

H. All information and bids submitted by bidders will be made available for public inspection following the award of the contract.

BID PROTESTS:

Any bid protest shall be filed with the office of the Architect.

BONDING REQUIREMENTS:

As a condition to considering a Surety Bond, Surety must be a CORPORATE Surety, holding a Certificate of Authorization from the Director of the Arizona State Insurance Department to transact insurance business within the State of Arizona. Individual Sureties will not be accepted.

PERFORMANCE BOND AND PAYMENT BOND:

The Contractor shall, before executing the Contract, file with the Owner, a Performance Bond and a Payment Bond. Bonds shall be executed in 5 original counterparts, on the form included in these Specifications or facsimile thereof.

SCOPE OF WORK: See Construction Documents.

CONTRACTOR'S LIABILITY INSURANCE:

Contractor shall maintain for the duration of his operation for this Project, statutory Workman's Compensation and/or Employee's insurance. In the event any of the Work required for the project is subcontracted and subcontractor therefore does not maintain above insurance, the Contractor may require the subcontractor to either obtain said insurance coverage for his (subcontractor's) portion of the work or reimburse the Contractor for providing it.

Coverage: Contractor shall maintain for the duration of the work required under this agreement, Liability Insurance in the form of a Comprehensive General and Automobile Liability policy. Such policy shall protect him from claims for bodily injury, including death, to his employees and all others; and from claims for property damage, any and all of which may arise out of or result from the Contractor's operations required for the project, whether such operations be by himself or any subcontractors or by anyone directly or indirectly employed by either of them. Insurance requirements shall meet State minimum amount for work performed.

Certificates: Contractor shall not begin any work at the project site until he has obtained all insurance required hereunder, certificates of such insurance have been filed with the Architect, and such insurance has been approved by the Owner through the Architect. The requirement also applies to subcontractors. Approval of the insurance shall not relieve or decrease the liability of the Contractor.

Certificates of insurance shall contain transcripts from the policies authenticated by proper office of the insurer, evidencing in particular those insured, the amount of the insurance, the location of and the operations to which the insurance applies, the expiration date and notice of cancellation clause.

Licenses: The insurance required must be written by a company licensed in Arizona and the company must be acceptable to the project Owner.

Currency: Contractor shall not cause any insurance policy to be canceled or permit it to lapse. Each insurance policy shall contain a clause to the effect that the policy shall not at any time during the construction period be canceled or reduced, restricted or limited until 30 days after the written notice as evidence by return receipt of registered or certified letter has been given the Contractor, the Owner and the Architect.

CIVIL RIGHTS:

A. Contractor agrees to comply with Title VI of the Civil Rights Act of 1964, and in accordance with said Act, no person on the grounds of race, color, sex, or national origin, shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any service or activity under this contract.

B. Contractor agrees to comply with the State of Arizona Executive Order Number 75-5, "PROHIBITION OF DISCRIMINATION IN STATE CONTRACTS, NON-DISCRIMINATION IN EMPLOYMENT BY GOVERNMENT CONTRACTORS AND SUBCONTRACTORS", which is hereby and made a part of this contract by reference. Notices to employees and applicants setting forth the provisions of this nondiscrimination clause, as required by Paragraph A of said Executive Order are required for posting by the Contractor.

C. Contractor agrees to comply with Title VII of the Civil Rights act of 1964, which prohibits discrimination against any employee or applicant for employment because of race, color religion, sex of national origin.

END OF SECTION

BID FORM

OWNER: **CITY OF SAN LUIS**
1090 E Union Street
San Luis, Arizona 85349

ARCHITECT: **THOMPSON DESIGN ARCHITECTS PC**
675 W. 16th Street
Yuma, Arizona 85364

BID FOR: **FLEET MAINTENANCE BUILDING EXPANSION**

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1. We, the undersigned, having familiarized ourselves with the local conditions, the project site, Instructions to Bidders, Form of Bid, the Plans and Specifications, and Addenda issues by the Architect, do hereby propose to furnish all labor, materials, necessary tools, expendable equipment, utility and transportation services necessary to complete the Work in strict accordance with the Contract Documents, including all Addenda.

2. Undersigned understands that Owner reserves the right to reject any or all bids, to waive any informality in receipt of this Bid, and to award Contract on the basis stated in the instructions to Bidders.

3. Undersigned declares that cost of Performance Bond in full amount of Contract, and Labor and Materials Payment Bond in full amount of Contract, is included in this Bid.

4. It is further agreed as a condition of the Contract that Owner will be damaged for each calendar day that the Project, in its entirety, is held out of possession by Owner after date fixed for the entire project's substantial completion. And that the Owner, without liability or obligation will withhold the amount of Nine Hundred Ten Dollars ($910.00) (per Public Works Regulation- specifically City of San Luis MAG Supplement 1, 2016, to MAG 2015) daily for each calendar day thereafter until the project is deemed substantially complete by the Architect.

5. Undersigned agrees to enter into, prepare and execute a Contract, if awarded on the basis of this Bid, within ten (10) days after date of such notice, and to furnish Bonds and Insurance Certificates in accordance with Contract Documents.

6. This Bid is valid for 30 calendar days following the date for receiving Bids

7. Undersigned acknowledges receipt of the following Addenda:

   Addendum No. ____ through Addendum No. _____

8. Time is of the essence of this Contract. Contractor's representations as to completion on time are principal and material inducements to Owner in entering into said contracts. The undersigned agrees to start the Work within 10 days after the Notice to Proceed, and obtain Substantial Completion of the Work within 450 calendar

days from the date of the Notice to Proceed.

It is understood that a detailed schedule shall be coordinated with Owner personnel prior to issuance of the Notice to Proceed. This schedule shall govern the project and the liquidated damages noted in section 4.

10. Undersigned proposes to enter into Contract for the following amounts:

BASE BID:

The undersigned agrees to provide all labor, materials, equipment and services necessary to complete the above referenced project, as indicated on the Drawings and as specified herein, for the lump sum price of

_____Dollars
($_____).

The said amount constituting the Total Base Bid.

The undersigned agrees to provide all labor, materials, equipment and services necessary to complete the Alternative Bid Items, as indicated on the Drawings and as specified herein, for the lump sum price of:

BID ALTERNATE 1:

Provide a bid total for all labor, materials, and equipment per the scope of work identified as Bid Alternate #1 on the sketch provided in Specification Section 012300 to include final grading, asphalt paving, and concrete paving within this designated area. Rough grading shall be included in base bid.:

_____Dollars
($_____).

BID ALTERNATE 2:

Provide a bid total for all labor, materials, and equipment per the scope of work identified as Bid Alternate #2 on the sketch provided in Specification Section 012300 to include final grading, asphalt paving, and concrete paving within this designated area. Rough grading shall be included in base bid.:

_____Dollars
($_____).

BID ALTERNATE 3:

Provide a bid total for all labor, materials, and equipment to provide Built-Up Roofing per Specification Section 075113 in lieu of single-ply roofing.

_____ Dollars
($_____).

Contractor _____ Date _____

By _____ Title _____

License No. _____ Address _____

Telephone _____ Surety _____

Attachments: Performance Bond.
Payment Bond.

END OF BID FORM

CITY OF SAN LUIS
FLEET MAINTENANCE BUILDING EXPANSION

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SECTION 011100

SUMMARY OF WORK

1.01 CONTRACTOR USE OF SITE

A. Limit use of site to allow:
   1. Project Staging Area including storage of materials and equipment shall be limited to the area of construction. Coordinate with the Owner for shut-down of irrigation system in this area.
   2. Existing sidewalks, landscaping, irrigation system, etc. that will be disturbed during staging procedures shall be returned to original condition as determined acceptable by the Architect, at the completion of the project.

B. Owner Operations:
   1. At no time during the work shall Contractor place, or cause to be placed, materials or equipment, or other items, at a location which would impede or impair access to or from the present facilities for public, employees or delivery personnel.
   2. Contractor shall cooperate with the Owner in providing traffic control during course of construction to minimize congestion or endangerment of public. Deliveries shall be scheduled as to not to impede the operations of the developer and public.

1.02 WORK BY OTHERS

A. Owner shall contract and pay for work by others to include technology equipment, and furnishings. Contractor shall be responsible for coordinating timing and preparation of such work.

1.03 SEQUENCE OF THE WORK

A. Demolition work shall be coordinated with new construction requirements.

1.04 PERMITS, FEES AND NOTICES

A. The reviewing authority and the authority having jurisdiction is the Owner and the City of San Luis (COSL). Documents will be submitted to COSL by the Architect for approval. Approved documents will be provided to the Contractor, and it shall be his responsibility for field review scheduling and systems approval. Final signed-off approval by the COSL shall be a condition of the Certificate of Substantial Completion Certificate.

B. It is not the responsibility of the Contractor to make certain that the Contract Documents are in accordance with applicable laws, statutes, building codes and regulations. However, if the Contractor observes that any of the Contract Documents are at variance therewith in any respect, he shall promptly notify the Architect and Owner in writing, and any necessary changes shall be accomplished

by appropriate Modification.

C. If the Contractor performs work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Architect and Owner, the Contractor shall assume full responsibility therefore and shall bear attributable costs.

D. The Contractor shall insure that no products containing asbestos are installed in the Project. At the completion of the Project, the Contractor shall certify to the Owner that no such materials have been installed. Should the Contractor discover asbestos containing material in the renovation process, it shall be immediately brought to the attention of the Architect for resolution.

1.05 SPECIAL CONDITIONS

A. Contractor shall provide safeguards during construction including but not limited to those described in Chapter 33 of the 2018 IBC. The contractor shall be completely responsible for protecting existing buildings and infrastructure from damage due to this work and shall repair at his expense and to the Architect's satisfaction. Additionally, where work occurs in existing facilities, contents and finishes remaining for continued use, shall be protected from damage and dust, or cleaned or replaced to the satisfaction of the Architect.

B. **Building HVAC systems shall *not* be operated until the new construction is approved as weather-tight by the Architect, the building interiors and ductwork have been cleaned and all of the HVAC start-up requirements as specified have been met and approved by the Mechanical Engineer.**

C. The Contractor shall provide and maintain primary and secondary emergency access roads to the project in the locations indicated on the Site Plan or as otherwise required by the Fire Department.

1.06 ADMINISTRATION OF THE CONTRACT

A. Architectural and Engineering Services. It is understood that an Architectural and Engineering liaison for the purpose of Contract compliance review and interpretation of the Drawings and Specifications is provided by the Owner. These services are not provided to assist the Contractor with his work. Should the services of the Architect, his Engineers, Testing Agency or Special Inspector be required to assist in the corrections of errors or omissions in construction by the Contractor, changes in structure or equipment where the Contractor has requested approval of substitute products, special site visits requested by the Contractor or additional visits required for verifications of corrections, additional submittal reviews due to rejections, lack of General Contractor review or required supplemental information, these services will be provided by the Architect to the Contractor, at the standard hourly rates plus overhead expenses. The Architect will invoice the Contractor for such services. Outstanding amounts due the Architect by the Contractor at the completion of the Project shall be deducted from money still due the Contractor by the Owner.

1.07 APPROVED APPLICATORS

A. Where specific instructions in the Specifications require that a particular product and/or material be applied and/or installed by an "approved applicator" it shall be the Contractor's responsibility to ensure that any subcontractor or subcontractor used for such work is in fact currently certified by the particular manufacturer for this type of installation or application.

B. The General Contractor shall employ licensed and experienced workman to perform the work. The General Contractor shall not self-perform more than one of the following major trades:

Concrete
PEMB Erection
Structural Steel
Masonry
Rough Framing and Carpentry

1.08 APPROVED MANUFACTURERS

A. Each section includes a list of manufacturers whose equipment is acceptable as to manufacture, subject to conformance with the Contract Documents. Careful checking must be made to verify that the equipment will meet all capacities, requirements, space allocations and is suitable to the intended purpose.

1.09 ARCHITECTURAL BARRIERS

A. It is the desire of the Owner that the facilities and improvements constructed under this Contract meet or exceed the intent of applicable public law concerning prohibition of discrimination, and that no individual be discriminated against on the basis of disability in the full and equal enjoyment of the goods, services, facilities, privileges, advantages, or accommodations of this completed Project.

B. The designers and drafters of these documents have intended to incorporate those Owner's intentions into these documents.

C. It is recognized that there may be products not incorporated into these documents that may more nearly meet the Owner's desires than those included.

D. The Owner hereby solicits those providing elements of this Project to bid and contract for the Project as required by these documents, but at the time of submitting shop drawings, or sooner when appropriate, and without causing delay in the Project, to also submit proposals for improving the accessibility of the Project to physically or mentally impaired persons.

END OF SECTION

SECTION 012300

ALTERNATES

1.01 ALTERNATE BIDS

A. Alternates quoted on Bid Forms will be reviewed and accepted or rejected at the Owner's option. Accepted Alternates will be identified in Owner-Contractor Agreement.

B. Definitions:
An Alternate is an amount proposed by Bidders and stated on the Bid Form for certain work defined in the Bidding Requirements.
The cost for each alternate is the net addition or deduction to the Contract Sum to incorporate the Alternate into the Work. No adjustments are made to the Contract Sum.

C. Coordination:
Modify or adjust affected adjacent Work as necessary to complete and fully integrate that work into the Project.
Execute accepted alternates under the same conditions as other work of this Contract.

D. SCHEDULE BID ALTERNATES (See attached site plan sketch):

1. BID ALTERNATE 1:

   Provide a bid total for all labor, materials, and equipment per the scope of work identified as Bid Alternate #1 on the attached sketch to include final grading, asphalt paving, concrete paving. Rough grading shall be included in base bid.

2. BID ALTERNATE 2:

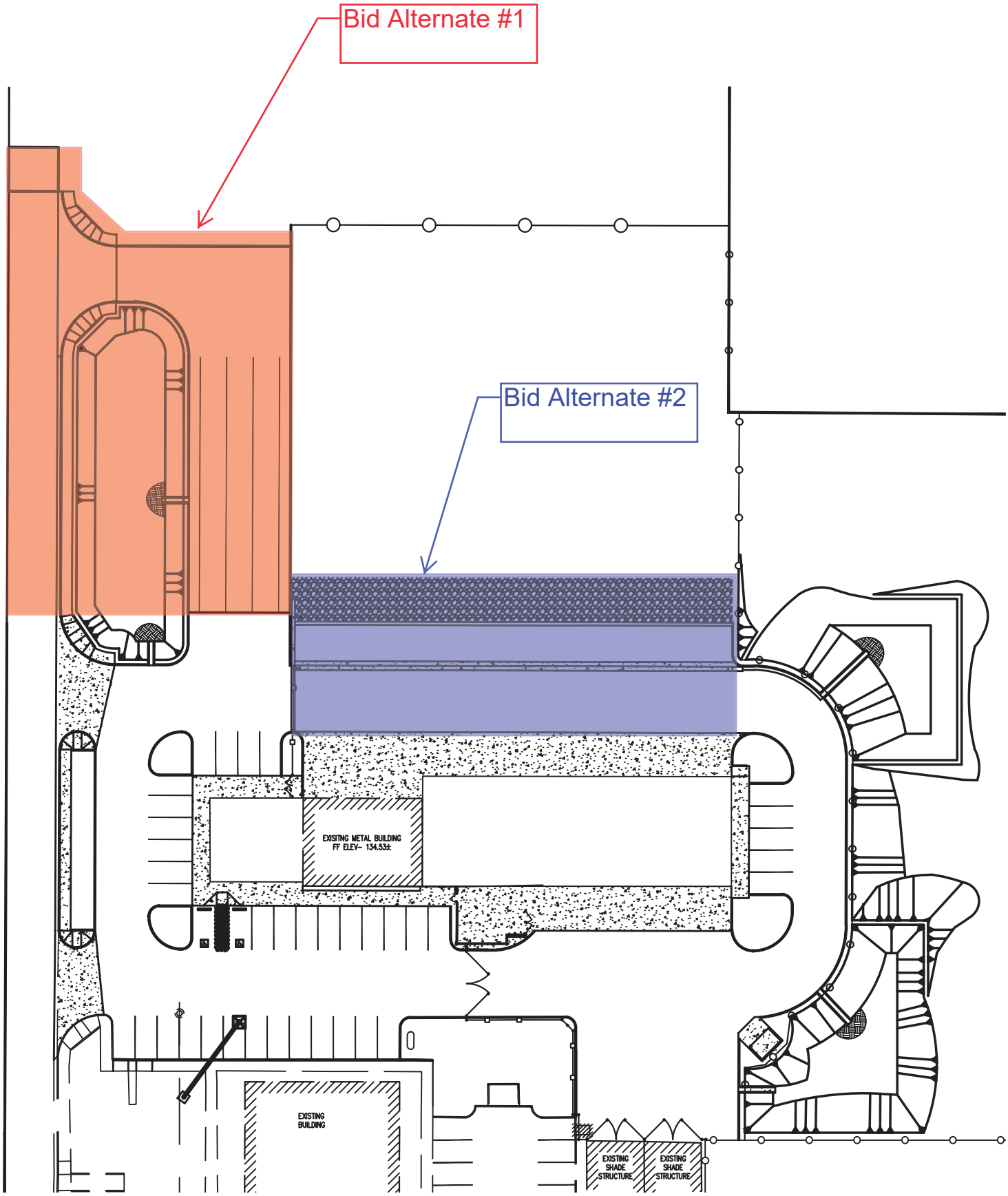
   Provide a bid total for all labor, materials, and equipment per the scope of work identified as Bid Alternate #2 on the attached sketch to include final grading, asphalt paving, concrete paving. Rough grading shall be included in base bid.

3. BID ALTERNATE 3:

   Provide a bid total for all labor, materials, and equipment to provide Built-Up Roofing per Specification Section 075113 in lieu of single-ply roofing.

Sketch attached.

END OF SECTION


Bid Alternate #1
Bid Alternate #2
EXISITNG METAL BUILDING
FF ELEV= 134.53±
EXISTING
BUILDING
EXISTING
SHADE
STRUCTURE
EXISTING
SHADE
STRUCTURE

SECTION 013300

SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Information submittals for products and systems as required under specification sections.

B. See Contract Closeout, Section 017700 for additional submittal requirements.

1.02 CONSTRUCTION SCHEDULE

A. Submit two copies of the Construction Schedule, broken down by Trades to the Architect for approval prior to the first Payment Application. Schedule shall be bar graph type and shall show proposed starting and completion dates for each Trade and activity for the Work. Submit current schedule with each application for payment.

1.03 SCHEDULE OF VALUES

A. Prior to first Application for Payment, submit a copy of the proposed Schedule of Values and anticipated Draw Amount Projection for payment purposes to Architect for Owner Use. Schedule shall include the following line item costs: General Contractor Fee, Bonds, Taxes, Supervision, Permits, and Mobilization. Additionally, the Contractor shall provide a break-down of any line item requested by the Architect for clarification.

1.04 SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

The General Contractor shall review Submittals for specification compliance and inter-trade coordination, ensuring the product has been specified or prior approved and meets the intent of the design. Additionally, requested information from the Subcontractors/Suppliers shall be completed by the Contractor prior to submission to Architect. He shall affix a stamp to the submittals indicating the same. It is not the responsibility of the Architect or Engineers to provide compliance and coordination work on behalf of the General Contractor. If it is apparent to the Architect that the General Contractor has not reviewed the submittals, the submittals will be returned 'rejected' without comment.

A. Shop Drawings:

1. Following the **Contractor's review and approval**, submit to the Architect digital submittal in PDF format via email of each Drawing for review. Submittals for HVAC, Plumbing and Electrical shall include at least one (1) hardcopy print for review.
   Partial submittals will not be accepted.
2. The Architect will review the Drawings and affix a stamp indicating the

findings of the review and will return same to the Contractor.

3. Comments, if any, will be noted and returned within (10) working days of submittal. The Architect and Engineer will work to expedite review; however, the contractor shall allow for (10) working days for Architect and/or Engineer review. If the contractor requires submittal review to occur in less than (10) working days a fee of $500 per review may be assessed to the contractor at the discretion of the Architect.
4. ***Fire Alarm System and Fire Sprinklers System Shop Drawings shall be submitted by the contractor to the State Fire Marshal and/or the fire authority having jurisdiction and obtain approval after submission to the Architect/Engineer.***
5. Drawings requiring re-submission shall be corrected and re-submitted as per the original submittal. Architectural and engineering time for third time submissions shall be assessed at the expense of the Contractor.

B. Product Data: Following Contractor's review and approval, submit to the Architect digital copies of Manufacturer's catalogs and brochures as required by the Specifications.

C. Samples: Following Contractor's review and approval, submit to the Architect hardcopy samples of materials in quantities and sizes as required by the Specifications. Submittals required other than for selection of color, texture, fabric or finish shall be given to the Architect at a time determined by the Contractor, which will allow for re-submittal and which will not cause a delay in the Work.

D. Color Selection: Within 60 days following the Notice to Proceed, submit to the Architect for approval, samples and appropriate information required for the selection of colors, textures, fabric and finishes for the entire Project. **Final selection of color, textures, fabrics or finishes will not be made until all applicable and related submittals have been provided**. If the Contractor fails to provide the required samples and related information within the time period, the Architect shall have the option of selecting colors, textures, fabric, finishes or specific materials from those specified or approved and the Contractor shall be obligated to provide the material selected by the Architect.

1.05 QUALITY CONTROL SUBMITTALS

A. Complete submission of mechanical, plumbing, and electrical equipment and materials shall be submitted at one time for each discipline. Partial submittals will not be acceptable. Submittals shall include the Manufacturer's Specifications, weights, space requirements, physical dimensions, rating of equipment and supplemental information requested by the Architect. Submit performance curves for pumps and fans. Where a submittal sheet describes items in addition to that item being submitted, delete such items. **Clearly note by ‘high-lighting’ equipment and materials which deviate from those shown or specified in size, weight, required clearances, and location of access.** Modifications to the Work as shown or specified in submittals shall be indicated and shall be provided by the Contractor as a part of the Work. Any materials or work that deviate from that specified and not ‘high-lighted’ or otherwise clearly noted as a change shall be immediately rejected and require re-submission. Any materials or work that deviate from that specified and not ‘high-lighted’ or otherwise clearly noted as a change and is not corrected on

the submittal by the Architect or Engineer during submittal review ***SHALL NOT be understood to be acceptance of the deviation(s) by the Architect or Engineer.*** Should a non-high-lighted deviation from plans and specifications on a reviewed submittal become a construction issue later in the project the responsibility to correct the issue and all related work shall be the sole responsibility of the General Contractor to replace and/or repair all related work to the satisfaction of the Architect.

B. Manufacturer's Instructions: Where Specifications require Work to be furnished, installed or performed in accordance with a specified product Manufacturer's instructions, distribute copies of such instructions to concerned parties.

2.0 SUBSTITUTIONS, ALTERNATIVES, AND CREDITS

A. If the contractor submits a substitution or alternative for Owner / Architect approval and said substitution or alternative requires additional design and/ or engineering by the Architect or his Engineers for incorporation into the project; the cost to provide such design and engineering services shall be borne by the contractor and included within the proposed cost of the substitution, alternative, or credit.

END OF SECTION

SECTION 014000

QUALITY REQUIREMENTS

1.01 TESTING LABORATORY AND INSPECTION SERVICES

A. The Contractor shall retain and pay cost of services of an independent testing laboratory, acceptable to the Architect, to perform materials testing work called for in the Drawings and Specifications. It is the responsibility of the Contractor to coordinate with testing lab for scheduling of required tests.

B. The testing laboratory shall distribute copies of reports via email as follows:
   1. to the Architect
   2. to the Structural Engineer
   3. to the Contractor

C. Costs for required re-testing of any building system due to Contractor's failure to comply with specified requirements shall be paid by the Contractor.

1.02 SPECIAL INSPECTION SERVICES

A. The Owner shall retain an independent inspector to perform all Earthwork Special Inspections and Structural Special Inspections and Structural Observations called for in the Drawings and Specifications. It is the responsibility of the Contractor to coordinate with Special Inspectors for scheduling of required inspections.

1.03 CONTRACTOR'S QUALITY CONTROL

A. Where Specifications require that a particular product be installed and/or applied by an applicator approved by the manufacturer, it is the Contractor's responsibility to ensure that subcontractor employed for such work is approved. Such subcontractor(s) shall provide evidence of being approved when requested by the Architect. Architect may reject work performed by unapproved applicators at the Architect’s discretion even AFTER the unapproved applicator work is completed, and surrounding work has advanced beyond the work of the unapproved applicator. Any cost associated with re-work as a result of using unapproved applicators shall be the sole cost of the General Contractor and shall not be grounds for schedule delays.

B. Work shall be executed by mechanics skilled in the work required. Conform to the methods, standards and accepted practices of the trade or trades involved.

C. Construction materials or methods which require special inspection and have been concealed without benefit of Special Inspector review, will require re-construction or proof of proper installation at no cost to Owner.

END OF SECTION

SECTION 015000

CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.01 GENERAL

A. Comply with codes and regulations regarding potable drinking water, sanitation, dust control, fire protection, and other temporary controls.

B. Remove temporary office facilities, toilets, storage sheds and other construction of temporary nature from the site as soon as, in the opinion of the Architect, the progress of the work will permit. Recondition and restore to a condition acceptable to the Architect, areas of the site occupied by temporary facilities.

C. Obtain approval from the Owner a minimum of 72 hours prior to disconnection or shutting off any utility to existing facilities..

1.02 TEMPORARY ELECTRICITY

A. Provide and pay for power service required from Utility and make arrangements for such service.

B. Provide temporary electric feeder from electrical service at location as indicated on Drawings.

C. Provide power outlets for construction operations, with branch wiring and distribution boxes. Provide flexible power cords as required.

D. Provide main service disconnect and overcurrent protection at convenient location.

1.03 TEMPORARY LIGHTING

A. Provide lighting for construction operations to achieve a minimum lighting level of 2 watts/sq. ft.

B. Provide branch wiring from power source to distribution boxes with lighting conductors, pigtails, and lamps as required.

1.06 TEMPORARY WATER SERVICE

A. Install water mains and set fire hydrants as soon as possible.

B. Provide, maintain and pay for suitable quality water service required for continued operations.

C. Extend branch piping throughout the site to provide outlets for hoses with threaded connections.

1.07 TEMPORARY SANITARY FACILITIES

A. Provide and maintain required number of portable toilets throughout the length of the project. New facilities shall not be used.

1.08 TEMPORARY FIRE PROTECTION

A. Provide UL labeled ABC all-purpose fire extinguishers adequate in size and number to protect the Work.

B. Comply with fire insurance and governing regulations.

1.09 FIELD OFFICE

A. Provide enclosed temporary field office complete with spread table and file storage. Provide adequate lighting and air conditioning. Field Office shall be accessible to the Architect at all times during construction hours.

B. Field Office at all times during construction, shall contain a reference set of project drawings and specifications, a separate set of maintained record drawings, and all approved shop drawings, submittals and samples.

1.10 BARRIERS

A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.

B. Provide protection for plant life designated to remain. Replace damaged plant life designated to remain.

C. Protect non-owned vehicular traffic, stored materials, site and structures from damage.

1.11 FENCING

A. Construction: Commercial grade chain link fence.

B. Provide minimum 6'-0" (1830mm) high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.12 NOISE AND DUST CONTROL

A. Exercise controls to keep noise and dust during construction to a minimum. Submit stormwater pollution prevention and dust control plan to Building Safety Department. Traffic or construction areas shall be sprinkled with water as required and in accordance with applicable City and County requirements.

B. Notify the Owner prior to using noise generating equipment in sufficient time to permit removal of occupants affected by such disturbances. Screen noisy equipment with temporary enclosures to shield adjacent areas.

1.13 WATER CONTROL

A. Grade site to drain. Maintain excavations free of water. Provide, operate and maintain pumping equipment.

B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

1.14 INTERIOR ENCLOSURES

A. Provide temporary partitions as required to separate work areas from Owner occupied areas, to prevent penetration of dust and moisture into Owner occupied areas, and to prevent damage to existing materials and equipment.

B. Construction: Stud framing and gypsum board sheet materials with closed joints and sealed edges at intersections with existing surfaces.

C. Install temporary doors with locksets to provide exists at end of corridors. Such doors shall not be used by workmen except with permission of Owner. Paint barricade on the public side and label Emergency Exits.

1.15 PROTECTION OF INSTALLED WORK

A. Protect installed Work and provide special protection where specified in individual specification Sections.

B. Provide temporary and removable protection for installed products. Control activity in immediate work area to minimize damage.

C. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.

D. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.

E. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.

F. Prohibit traffic from landscaped areas.

1.16 ACCESS ROADS

A. Construct and maintain temporary roads accessing public thoroughfares to serve construction area.

B. Extend and relocate as Work progress requires. Provide detours necessary for unimpeded traffic flow.

C. Provide and maintain access to fire hydrants, free of obstructions.

D. Provide means of removing mud from vehicle wheels before entering streets.

E. Designated existing on-site roads may be used for construction traffic.

1.17 PROGRESS CLEANING

A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.

B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

C. Broom and vacuum clean interior areas prior to start of surface finishing and continue cleaning to eliminate dust.

D. Regularly remove waste materials, debris, and rubbish from site and dispose off-site. Do not allow to accumulate.

1.18 PROJECT IDENTIFICATION

A. Provide construction site identification sign as required by contract documents.

B. Erect on site at location established by Architect.

C. No other signs are allowed without Architect's permission except those required by law.

END OF SECTION

SECTION 017400

WARRANTIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers' standard warranties on products and special warranties.

1. Refer to the General Conditions for terms of the Contractor's period for correction of the Work.

B. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.3 DEFINITIONS

A. Standard product warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.

B. Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

1.4 WARRANTY REQUIREMENTS

A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.

B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition within 15 working days after notification by Owner, unless the Contractor can show that parts cannot be obtained in a timely manner. The Owner may complete such work if it is not completed by the Contractor in the provided time period, and the Owner shall charge the Contractor for any costs incurred in completion of the work. The

performance of the work by the Owner shall not void or jeopardize warranties associated with the work in any way. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

D. Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.

1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

E. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

F. PROJECT WARRANTY: This warranty shall not replace or supercede any warranty requirements of particular sections of the specifications, but is in addition to those warranties. The General Contractor shall provide a project warranty for a period of TWO YEARS following the date of Substantial Completion. The General Contractor shall provide a general project warranty supported by warranties from each of the subcontractors. All warranties shall state time of beginning of warranty, period of warranty, shall be an original document on the company's official letterhead, shall be signed by an authorized agent of the company and shall be notarized.

1.5 SUBMITTALS

A. Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.

1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within 15 days of completion of that designated portion of the Work.

B. When the Contract Documents require the Contractor, or the Contractor and a subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner, through the Architect, for approval prior to final execution.

C. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Submit a draft to the Owner, through the Architect, for approval prior to final execution.

1. Refer to Divisions 2 through 49 Sections for specific content requirements and particular requirements for submitting special warranties.

D. Form of Submittal: At Final Completion compile 2 copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.

E. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch.

1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the Installer.

2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.

3. When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

END OF SECTION 017400

SECTION 017700

PROJECT CLOSEOUT

PART 1 GENERAL

1.01 FINAL CLEANING AND ADJUSTMENTS

A. Perform the following special cleaning for trades at completion of Work. Employ experienced workmen or professional cleaners for the final cleaning:
   1. Remove marks, stains, fingerprints, soil and dirt from paint, stain and wall covering.
   2. Remove spots, soil, paint and mastic from tile work and wash same.
   3. Clean fixtures, equipment and piping; remove stains, paint, dirt and dust.
   4. Remove temporary floor protections; clean and polish floors.
   5. Clean concrete walks and slabs of plaster or cement droppings, paint and other objectionable materials to present a neat, clean appearance.
   6. Clean exterior and interior metal surfaces, including doors and windows and their frames.
   7. Remove oil, stains, dust, dirt, paint and the like from items required to have a polished finish; polish and leave without fingermarks or other blemishes.
   8. Wash glass inside and outside.

B. After HVAC system has been tested, balanced and recorded, make minor air flow adjustments if requested by Owner for individual user comfort.

C. Existing improvements, inside or outside the property which are disturbed, damaged or destroyed by the Work under the Contract shall be restored to the condition in which they originally were, or to the satisfaction of the Architect.

1.02 PROJECT RECORD DOCUMENTS

A. As the work progresses, the Contractor shall maintain a complete and accurate record of changes or deviations from the Contract Documents and Shop Drawings, indicating the Work as actually installed. Record information in the appropriate locations on a record set of blueline prints of the Drawings and Shop Drawings and a copy of the Specifications which are maintained solely for the purpose of this documentation. Keep this record set of Contract Documents and Shop Drawings at the project site for review by the Owner and Architect. Information contained in the record documents shall include, but not be limited to:
   1. Modifications made by Addenda, Change Orders, Construction Change Directives and Architect's Supplemental Instructions which shall be transferred to the record documents.
   2. Location of site underground pipes, conduits, ducts, cables and similar work, dimensioned horizontally to permanent points of reference and located vertically by indicating depth of burial. Dimensions shall be accurate within $\pm$6 inches.
   3. Location of building plumbing piping, sprinkler piping, control valves, heating and air conditioning equipment, mechanical piping, ductwork, major conduit runs, power, control and alarm wiring, etc., dimensioned horizontally to permanent points of reference. Dimensions shall be accurate within 6 inches. By notation, describe the vertical location of the item such as "below slab," "above ceiling," etc.
   4. Modifications made to accommodate field conditions.
   5. Location and function of mechanical and electrical control devices and shut-off valves.

6. Revise Drawings and panel schedules to show final circuiting of electrical fixtures and equipment.

B. At the completion of the project, field record drawings approved by the Architect shall be electronically scanned by the Contractor and recorded in a PDF format on a disc. The disc shall be submitted with the project close-out documents.

C. OWNER'S COMPLETED PROJECT AND MANUAL SYSTEMS TRAINING: Prior to final payment, submit one hard-back, loose-leaf binders containing the following required submittals, suitably typed, indexed and labeled for ready reference:

1. Subcontractors, major suppliers list with company names, addresses and telephone numbers.
2. Affidavit of payment to all subcontractors and suppliers.
3. Warranties and certifications of all Subcontractors supplying equipment and as described in individual Sections of the Specifications.
4. Affidavit from General and Subcontractors certifying that "no asbestos containing products were installed in this project".
5. Certificate of Acceptance issued by State Fire Marshal.
6. Record drawings on disc in PDF format.
7. List of Extra Materials supplied to Owner, signed by Owner's representative.
8. Color Schedule
9. Evidence by individual affidavits signed by Owner personnel of complete operations and maintenance training of all systems including but not limited to mechanical, plumbing, fire protection, kitchen equipment, electrical and special systems.
10. Written maintenance instructions and evidence by affidavit signed by Owner personnel of complete maintenance training of products and finishes including but not limited to landscaping and irrigation system, flooring, roofing, marker boards, casework, and bleachers.
11. Other items required by the Specifications.
12. Maintenance/operation instructions and parts list .
    a. Submit operating and maintenance instructions and parts lists for all materials, equipment and systems under Divisions 15 and 16, and all finish materials and operable equipment under all other Divisions.

    b. Operating instructions shall include complete operating sequence, control diagrams, description of method of operating machinery, machine serial numbers, factory order numbers, parts, tests, instruction books, suppliers phone numbers and addresses and individual equipment guarantees. Parts lists shall be complete in every respect, showing parts and part numbers for ready reference.

    c. Maintenance instructions shall include a written list of required and suggested maintenance for mechanical, plumbing, electrical or other equipment or features in the project. Each item shall contain a brief description of the maintenance required as well as the recommended time frame or period for the maintenance. Include lists of filter sizes for air handling equipment, indicated "washable" or "disposable" and for which unit the filter is for. Shut off valves, etc., must be clearly marked on as-constructed drawings.

    d. Assemble maintenance manual and operating instructions in hard back loose leaf binders. Suitably label and index material for ready reference.

e. Upon substantial completion of the Project Work, submit one copy of the Maintenance Manual and Operating Instructions to the Architect for approval. Upon receipt of Notice of Approval, deliver the additional copy to the Owner.

1.03 SPARE PARTS AND MAINTENANCE MATERIALS

A. Deliver spare parts, tools, extra stocks of material and similar physical items required by individual specification sections to the Owner with a copy of the transmittal to the Architect. Obtain signed receipts from the Owner for all items.

1.04 WARRANTIES

A. The date of commencement of warranties shall be the date of Substantial Completion.

END OF SECTION

SECTION 017823

OPERATION AND MAINTENANCE DATA

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for preparing operation and maintenance manuals, including the following:

1. Operation and maintenance documentation directory.
2. Emergency manuals.
3. Operation manuals for systems, subsystems, and equipment.
4. Maintenance manuals for the care and maintenance of products, materials, and finishes, systems and equipment.
5. Compilation of documents and submission on CD.

B. Related Sections include the following:
1. Section 017700 – Project Closeout for submitting operations and maintenance manuals.
2. Divisions 2 through 49 Sections for specific operation and maintenance manual requirements for products in those Sections.

1.3 DEFINITIONS

A. System: An organized collection of parts, equipment, or subsystems united by regular interaction.

B. Subsystem: A portion of a system with characteristics similar to a system.

1.4 SUBMITTALS

A. Initial Submittal: Submit to Architect 1 draft copy of each manual at least 2 weeks before requesting inspection for Substantial Completion. Include a complete operation and maintenance directory. Architect will return the draft with comments toward completion of the manuals. Address all comments and prepare final submittal.

B. Final Submittal: Submit to Owner 3 copies of each manual in hard copy, and 1 digital copy final.

1.5 COORDINATION

A. Where operation and maintenance documentation includes information on installations by more than one factory-authorized service representative, assemble and coordinate information furnished by representatives and prepare manuals.

PART 2 - PRODUCTS

2.1 OPERATION AND MAINTENANCE DOCUMENTATION DIRECTORY

A. Organization: Include a section in the directory for each of the following:

1. List of documents.
2. List of systems.
3. List of equipment.
4. Table of contents.

B. List of Systems and Subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.

C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.

D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.

E. Identification: In the documentation directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with the same designation used in the Contract Documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, "Preparation of Operating and Maintenance Documentation for Building Systems."

2.2 MANUALS, GENERAL

A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page.
2. Table of contents.
3. Manual contents.

B. Title Page: Enclose title page in transparent plastic sleeve. Include the following information:

1. Subject matter included in manual.
2. Name and address of Project.
3. Name and address of Owner.
4. Date of submittal.
5. Name, address, and telephone number of Contractor.
6. Name and address of Architect.

7. Cross-reference to related systems in other operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to Specification Section number in Project Manual.

1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

D. Manual Contents: Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder.

1. Binders: Heavy-duty, 3-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2-by-11-inch paper; with clear plastic sleeve on spine to hold label describing contents and with pockets inside covers to hold folded oversize sheets.

a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.
b. Identify each binder on front and spine, with printed title "OPERATION AND MAINTENANCE MANUAL," Project title or name, and subject matter of contents. Indicate volume number for multiple-volume sets.

2. Dividers: Heavy-paper dividers with plastic-covered tabs for each section. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to Specification Section number and title of Project Manual.
3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software diskettes for computerized electronic equipment.
4. Supplementary Text: Prepared on 8-1/2-by-11-inch 20-lb white bond paper.
5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.

a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.
b. If drawings are too large to be used as foldouts, fold and place drawings in labeled envelopes and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

2.3 OPERATION MANUALS

A. Content: In addition to requirements in this Section, include operation data required in individual Specification Sections and the following information:

1. System, subsystem, and equipment descriptions.
2. Performance and design criteria if Contractor is delegated design responsibility.
3. Operating standards.
4. Operating procedures.
5. Operating logs.

6. Wiring diagrams.
7. Control diagrams.
8. Piped system diagrams.
9. Precautions against improper use.
10. License requirements including inspection and renewal dates.

B. Descriptions: Include the following:

1. Product name and model number.
2. Manufacturer's name.
3. Equipment identification with serial number of each component.
4. Equipment function.
5. Operating characteristics.
6. Limiting conditions.
7. Performance curves.
8. Engineering data and tests.
9. Complete nomenclature and number of replacement parts.

C. Operating Procedures: Include the following, as applicable:

1. Startup procedures.
2. Equipment or system break-in procedures.
3. Routine and normal operating instructions.
4. Regulation and control procedures.
5. Instructions on stopping.
6. Normal shutdown instructions.
7. Seasonal and weekend operating instructions.
8. Required sequences for electric or electronic systems.
9. Special operating instructions and procedures.

D. Systems and Equipment Controls: Describe the sequence of operation, and diagram controls as installed.

E. Piped Systems: Diagram piping as installed, and identify color-coding where required for identification.

2.4 PRODUCT MAINTENANCE MANUAL

A. Content: Organize manual into a separate section for each product, material, and finish. Include source information, product information, maintenance procedures, repair materials and sources, and warranties and bonds, as described below.

B. Source Information: List each product included in manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

C. Product Information: Include the following, as applicable:

1. Product name and model number.
2. Manufacturer's name.
3. Color, pattern, and texture.
4. Material and chemical composition.

5. Reordering information for specially manufactured products.

D. Maintenance Procedures: Include manufacturer's written recommendations and the following:

1. Inspection procedures.
2. Types of cleaning agents to be used and methods of cleaning.
3. List of cleaning agents and methods of cleaning detrimental to product.
4. Schedule for routine cleaning and maintenance.
5. Repair instructions.

E. Repair Materials and Sources: Include lists of materials and local sources of materials and related services.

F. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

2.5 SYSTEMS AND EQUIPMENT MAINTENANCE MANUAL

A. Content: For each system, subsystem, and piece of equipment not part of a system, include source information, manufacturers' maintenance documentation, maintenance procedures, maintenance and service schedules, spare parts list and source information, maintenance service contracts, and warranty and bond information, as described below.

B. Source Information: List each system, subsystem, and piece of equipment included in the manual, identified by product name and arranged to match manual's table of contents. For each product, list name, address, and telephone number of Installer or supplier and maintenance service agent, and cross-reference Specification Section number and title in Project Manual.

C. Manufacturers' Maintenance Documentation: Manufacturers' maintenance documentation including the following information for each component part or piece of equipment:

1. Standard printed maintenance instructions and bulletins.
2. Drawings, diagrams, and instructions required for maintenance, including disassembly and component removal, replacement, and assembly.
3. Identification and nomenclature of parts and components.
4. List of items recommended to be stocked as spare parts.

D. Maintenance Procedures: Include the following information and items that detail essential maintenance procedures:

1. Test and inspection instructions.
2. Troubleshooting guide.
3. Precautions against improper maintenance.
4. Disassembly; component removal, repair, and replacement; and reassembly instructions.
5. Aligning, adjusting, and checking instructions.
6. Demonstration and training videotape, if available.

E. Maintenance and Service Schedules: Include service and lubrication requirements, list of required lubricants for equipment, and separate schedules for preventive and routine maintenance and service with standard time allotment.

1. Scheduled Maintenance and Service: Tabulate actions for daily, weekly, monthly, quarterly, semiannual, and annual frequencies.
2. Maintenance and Service Record: Include manufacturers' forms for recording maintenance.

F. Spare Parts List and Source Information: Include lists of replacement and repair parts, with parts identified and cross-referenced to manufacturers' maintenance documentation and local sources of maintenance materials and related services.

G. Maintenance Service Contracts: Include copies of maintenance agreements with name and telephone number of service agent.

H. Warranties and Bonds: Include copies of warranties and bonds and lists of circumstances and conditions that would affect validity of warranties or bonds.

1. Include procedures to follow and required notifications for warranty claims.

PART 3 - EXECUTION

3.1 MANUAL PREPARATION: All information to be submitted shall be compiled as specified and submitted on CD.

A. Product Maintenance Manual: Assemble a complete set of maintenance data indicating care and maintenance of each product, material, and finish incorporated into the Work.

B. Operation and Maintenance Manuals: Assemble a complete set of operation and maintenance data indicating operation and maintenance of each system, subsystem, and piece of equipment not part of a system.

1. Engage a factory-authorized service representative to assemble and prepare information for each system, subsystem, and piece of equipment not part of a system.
2. Prepare a separate manual for each system and subsystem, in the form of an instructional manual for use by Owner's operating personnel.

C. Manufacturers' Data: Where manuals contain manufacturers' standard printed data, include only sheets pertinent to product or component installed. Mark each sheet to identify each product or component incorporated into the Work. If data include more than one item in a tabular format, identify each item using appropriate references from the Contract Documents. Identify data applicable to the Work and delete references to information not applicable.

1. Prepare supplementary text if manufacturers' standard printed data are not available and where the information is necessary for proper operation and maintenance of equipment or systems.

D. Drawings: Prepare drawings supplementing manufacturers' printed data to illustrate the relationship of component parts of equipment and systems and to illustrate control sequence and flow diagrams. Coordinate these drawings with information contained in Record Drawings to ensure correct illustration of completed installation.

1. Do not use original Project Record Documents as part of operation and maintenance manuals.

2. Comply with requirements of newly prepared Record Drawings in Division 1 Section "Project Record Documents."

E. Comply with Division 1 Section "Closeout Procedures" for the schedule for submitting operation and maintenance documentation.

END OF SECTION 017823

SECTION 017839

PROJECT RECORD DOCUMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes administrative and procedural requirements for Project Record Documents, including the following:

1. Record Drawings.
2. Record Specifications.
3. Record Product Data.

B. Related Sections include the following:

1. Section 017400 – Project Closeout for general closeout procedures and maintenance manual requirements.
2. Section 017823 - Operation and Maintenance Data for operation and maintenance manual requirements.
3. Divisions 2 through 33 Sections for specific requirements for Project Record Documents of products in those Sections.

1.3 SUBMITTALS

A. Record Drawings: Comply with the following:

1. Number of Copies: Submit one set of marked-up Record Prints.

B. Record Specifications: Submit one copy of Project's Specifications, including addenda and contract modifications.

PART 2 - PRODUCTS

2.1 RECORD DRAWINGS

A. Record Prints: Maintain one set of blue- or black-line white prints of the Contract Drawings and Shop Drawings.

1. Preparation: Mark Record Prints to show the actual installation where installation varies from that shown originally. Require individual or entity who obtained record data, whether individual or entity is Installer, subcontractor, or similar entity, to prepare the marked-up Record Prints.

a. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.
b. Accurately record information in an understandable drawing technique.
c. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.

2. Content: Types of items requiring marking include, but are not limited to, the following:

a. Dimensional changes to Drawings.
b. Revisions to details shown on Drawings.
c. Depths of foundations below first floor.
d. Locations and depths of underground utilities.
e. Revisions to routing of piping and conduits.
f. Revisions to electrical circuitry.
g. Actual equipment locations.
h. Duct size and routing.
i. Locations of concealed internal utilities.
j. Changes made by Change Order or Construction Change Directive.
k. Changes made following Architect's written orders.
l. Details not on the original Contract Drawings.
m. Field records for variable and concealed conditions.
n. Record information on the Work that is shown only schematically.

3. Mark the Contract Drawings or Shop Drawings, whichever is most capable of showing actual physical conditions, completely and accurately. If Shop Drawings are marked, show cross-reference on the Contract Drawings.
4. Mark record sets with erasable, red-colored pencil. Use other colors to distinguish between changes for different categories of the Work at the same location.
5. Mark important additional information that was either shown schematically or omitted from original Drawings.
6. Note Construction Change Directive numbers, alternate numbers, Change Order numbers, and similar identification, where applicable.
7. Completion: At completion of project provide Owner the marked-up as-builts as well as a color scanned PDF of the set.

2.2 RECORD SPECIFICATIONS

A. Preparation: Mark Specifications to indicate the actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications.

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.
2. Mark copy with the proprietary name and model number of products, materials, and equipment furnished, including substitutions and product options selected.
3. Record the name of the manufacturer, supplier, Installer, and other information necessary to provide a record of selections made.
4. For each principal product, indicate whether Record Product Data has been submitted in operation and maintenance manuals instead of submitted as Record Product Data.
5. Note related Change Orders, Record Drawings, and Product Data where applicable.

2.3 MISCELLANEOUS RECORD SUBMITTALS

A. Assemble miscellaneous records required by other Specification Sections for miscellaneous record keeping and submittal in connection with actual performance of the Work. Bind or file miscellaneous records and identify each, ready for continued use and reference.

B. Subcontractor List: Provide complete list of all project subcontractors, area of work, and contact.

C. As-Built Material List: Provide a list showing all materials and finishes, with particular color/pattern name, supplier and contact, and location of use.

D. No Asbestos: Submit a signed letter certifying that no asbestos-containing materials have been installed on the project.

PART 3 - EXECUTION

3.1 RECORDING AND MAINTENANCE

A. Recording: Maintain one copy of each submittal during the construction period for Project Record Document purposes. Post changes and modifications to Project Record Documents as they occur; do not wait until the end of Project.

B. Maintenance of Record Documents and Samples: Store Record Documents and Samples in the field office apart from the Contract Documents used for construction. Do not use Project Record Documents for construction purposes. Maintain Record Documents in good order and in a clean, dry, legible condition, protected from deterioration and loss. Provide access to Project Record Documents for Architect's reference during normal working hours.

END OF SECTION 017839

SECTION 033000

CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Cast-in-place concrete as indicated on the Structural Drawings and as specified including, but not limited to, the following:
   1. Building foundations and slabs on grade.
   2. Sidewalks, curbs and gutters.
   3. Site structures including, but not limited to, site lighting supports, and equipment requiring cast-in-place concrete items.

1.02 QUALITY ASSURANCE

A. Standards:
   1. Standard for measuring, mixing, transporting and placing of concrete shall be ACI-301 and ACI-304.
   2. Standard for measuring, mixing and delivery of ready mixed shall be ASTM C94, except that time in mixer after water has been added at batch plant is limited to 1-1/2 hours. If air temperature exceeds 85 deg, time in mixer is limited to 1 hour.
   3. There shall be no site-mixed concrete.
   4. Standard for measuring flatness and levelness shall be the ACI 117.

1.03 PROJECT CONDITIONS

A. Hot weather protection:
   1. Comply with ACI-305R.
   2. When air temperature or form temperature exceed 100°F., control concreting as follows.
      a. Cool forms to a maximum 80°F;
      b. Cool concrete to a maximum 90°F leaving the mixer;
      c. Adjust concrete mix to retard set with retarding admixture if included in design mix and adequately tested.

PART 2 PRODUCTS

2.01 MATERIALS (See General Structural Notes on Drawings for additional information)

A. Portland Cement: ASTM C150, Type II, alkali content not to exceed 0.6 percent. Use one brand and type of cement throughout Project unless otherwise specified.

B. Aggregate:
   1. Structural Concrete: Clean, coarse aggregate and gravel, free from foreign matter, conforming to ASTM C33. Aggregate shall be graded from coarse to fine in accordance with ASTM C33, Size 67. For exposed exterior sidewalks, 1" maximum size smooth aggregate shall be used.

C. Admixtures: (use as indicated on Structural Drawings)

1. Air entraining admixture: ASTM C260. *(Do not use in areas where concrete is to be polished)*
2. Flyash: ASTM C618 Class F
3. Use of calcium chloride is not permitted.
4. Use set-retarding admixtures during hot weather only when approved by Architect.
5. The use of admixtures, except water reducing agents and super-plasticizing, for floor slabs on grade is not permitted.

D. Water: Potable.

2.02 ACCESSORIES

A. Bonding Agent: Sikastix 300 series or equal as approved, type as recommended by Manufacturer; manufactured by Sika.

B. Non-Shrink Grout: Premixed compound consisting of non-metallic aggregate, cement, water reducing and plasticizing agents; capable of developing minimum compressive strength of 5,000 psi (34 MPa) in 28 days conforming to CRD-621.

C. Formed Construction Joint: Standard design plastic key, tongue and groove key joint; 3-1/2 inch (88mm) vertical dimension for 4 inch slabs.

D. Preformed Expansion Joint Filler: ASTM D994.

E. Vapor Barrier: A vapor-impermeable barrier shall be provided beneath structural slabs on grade.

Permeance after mandatory conditioning: Less than 0.01 Perms ASTM E 1745 Section 7.1, Subparagraphs 7.1.2-.5
Strength: ASTM E 1745 Class A
Thickness: 15 mils minimum
Basis of Design Product: Stego Wrap Vapor Barrier with accessories (Stego Tape, Stego Mastic)

Other acceptable products and accessories include:
Reef VaporGuard,
Poly- America Vapor Guard

2.03 MIXES

A. Design of Mixes: ACI 301 and ACI 304, and as specified in General Notes on Structural Drawings including water resistant admixture.

B. Mix and deliver ready-mixed concrete in accordance with requirements of ASTM C94, Option A.
1. Not more than 90 minutes shall elapse from time water is introduced into the concrete mixture until completion of placement. If the air temperature exceeds 85 deg., time shall be limited to 60 minutes.
2. Do not add water to mix that has stiffened to increase its workability.
3. At no time shall concrete mix exceed a bulb thermometer reading of 85 degrees F. or over.

4. Use ice or other method as reviewed by Architect, to keep concrete below 85 degrees F. temperature.

C. Use of water reducing admixture if needed in concrete shall be submitted for approval. Proportion in accordance with Manufacturer's recommendations. Delivery tickets shall state the amount and kind of admixture.

PART 3 EXECUTION

3.01 PREPARATION

A. Prior to placing concrete:
1. Clean equipment involved.
2. Remove debris and foreign material from the forms.
3. Remove concrete laitance from reinforcing steel.

B. Coordinate the necessary Trades as required to provide the sleeves, bolts, anchors, holes, etc., to be built in.

C. All embedded items such as, but not limited to, anchor bolts, weld plates and holdowns shall be adequately secured in place prior to pouring concrete.

3.02 PLACING OF CONCRETE

A. Concrete Work shall be performed in accordance with ACI-301 except as amended by this Section.

B. Convey concrete from the mixer to place of final deposit by methods which will prevent segregation of aggregate or loss of material. Place concrete at such a rate that concrete is at all times plastic and to insure a practically continuous flow of concrete. Concrete not in place 1-1/2 hours after water has been added at batch plant or not meeting the requirements of paragraphs 1.03 A.2 and 2.03 C.1 may be rejected by Architect.

C. Place concrete as nearly as practicable in its final position to avoid segregation due to re-handling or flowing. Do not deposit concrete that has partially hardened or been re-tempered. Use of a vibratory laser leveling/screeding machine is recommended.

D. Do not place concrete during rain unless adequate protection has been provided.

E. Thoroughly compact concrete by suitable means during the placing, and work around the reinforcement and embedded items into the corners of the forms.
1. Use vibrators to aid in the placement of the concrete, operated by experienced personnel.
2. Design forms to withstand the action of the vibrators.
3. Keep at least one spare operating vibrator on the job at all times during the concrete operations.

3.03 CONSTRUCTION JOINTS AND CONTROL JOINTS

A. Place construction joints and control joints where required to ensure that undesirable thermal and shrinkage cracking of slabs is minimized.
   1. See Drawings for locations of construction joints and control joints in slabs-on-grade and in topping pours.
   2. If drawings do not indicate locations, verify with Architect prior to placement of slabs-on-grade and topping pours.

B. Additional reinforcing may be required at some construction and control joints, and shall be supplied and installed at no additional cost.

C. Reinforcing shall be continuous through control joints. No concrete pour shall be longer than 100 feet or more than 4,000 square feet in area. Unless otherwise indicated on the Structural Drawings. Provide shear keys as detailed.

D. At exterior slabs-on-grade provide a 1/2 inch wide expansion joint wherever slabs abut vertical construction elements whether indicated or not.

3.04 FINISHING VERTICAL (FORMED) SURFACES

A. Formed surface finishes:
   1. Interior exposed surfaces and exterior exposed surfaces: Forms shall have smooth finish free of wood grain lines. Snap ties shall be aligned in a uniform pattern approved by the Architect. Concrete shall be thoroughly vibrated to remove air pockets. Remove fins, patch tie holes, stone joint marks and out-of-plane surfaces to within 1/16 inch of flush, to produce uniformity, dense and smooth concrete.
   Note: Surface repair in the form of sacking or skim-coats will not be accepted.

3.05 FINISHING HORIZONTAL SURFACES

A. Interior slabs for both exposed concrete floors and floors to receive covering, shall receive a monolithic steel trowel finish.

B. No logo or company stamps allowed in concrete.

C. When concrete has hardened sufficiently so that excess fines will not be brought to the surface, trowel slab with a steel trowel to a smooth surface free of pinholes and other imperfections. A mechanical trowel with rotating steel blades may be used for this operation.

D. After the surface has hardened sufficiently to ring under a trowel, trowel again with a steel trowel to a hard, burnished surface free of blemishes. A mechanical rotating trowel will not be permitted for this operation.

E. Finished exterior concrete sidewalk/slabs shall receive a medium broom finish.

F. Concrete slabs scheduled to receive roofing, ceramic tile, concrete topping or similar finishes shall have a screeded finish but true and even to plane with no sharp projections or ridges.

G. Finished floors to meet FF 25 with FL 20 per ACI 117. It should be taken into account that surface grinding at control joints may be required due to curling of the slab. Time of acceptance of floor flatness will be just prior to application of the flooring, or in the case of no finished flooring, at Substantial Completion.

H. Saw cut pattern indicated on Drawings. Use 3/16 inch thick blade, cutting 1/3 minimum of depth of slab thickness. Place joint sealer as soon as practical to reduce curling.

I. Use a small radius edger on edges of exposed Work. Use a deep cutting, scoring tool to provide scoring at exterior walks where indicated as 'scored' concrete.

J. Use type surface retarder preferred by Contractor at exterior exposed aggregate sidewalks for exposing aggregates.

3.06 CURING

A. Cure interior and exterior concrete as follows: Immediately after the finishing operations have been completed and maring of the concrete will not occur, the entire surface of the newly place concrete shall be uniformly sprayed with the water based curing compound per manufacturers instructions and then cover with 4 mil polyethylene sheeting. Lap sheets 18" and weight edges to remain in full contact. Slab shall remain undisturbed for a minimum of 7 days.

B. During the curing period, protect the concrete from damaging mechanical disturbances, particularly load stresses, heavy shock, and excessive vibrations. Protect finished concrete surfaces from damage caused by construction equipment, materials or methods.

C. Construction and control joints shall be sealed per Section 07900.

3.07 FIELD QUALITY CONTROL

A. Tests: Inspection and testing of concrete mix will be performed by a testing laboratory in accordance with Section 01400.
   1. Provide free access to Work and cooperate with appointed firm.
   2. Tests of cement and aggregates may be performed to ensure conformance with specified requirements.
   3. Four concrete test cylinders shall be taken for every 150 cubic yards or 5,000 SF of concrete placed. One cylinder shall be tested after 7 days for information. Test two cylinders after 28 days. Hold one cylinder for additional information, as required.
   4. Take one slump test for each set of test cylinders taken.
   5. Concrete which does not meet the compressive strength requirement at 28 days will be rejected and removed from the Project, and disposed of in a legal manner.

3.08 PROTECTION

A. Protect finished surfaces from stains or abrasions. Protect surfaces or edges by leaving forms in place or by providing temporary covers. Protect concrete from rain, flowing water or mechanical injury.

B. Protect floor slabs from the droppings of plaster, paint, dirt, and other marring by covering with polyethylene plastic sheet, well lapped and sealed. Maintain covering in good condition until danger of damage is past.

END OF SECTION

SECTION 042000

CONCRETE UNIT MASONRY

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Concrete unit masonry construction as shown on Drawings, General Structural Notes and as specified.

1.02 SUBMITTALS

A. Submit samples of standard integral color slump block CMU for color selection.

1.03 QUALITY ASSURANCE

A. Standards:
   1. The "Levels of Quality", Standard 107 of Arizona Masonry Guild (AMG) shall apply and by reference is hereby made a part of this Specification. Reference to Custom, Standard or Economy in this Specification shall be as defined in latest edition of AMG Standard 107.
   2. Comply with the requirements of ACI 530.1/ASCE 6 "Specifications for Masonry Structures", except as otherwise indicated.
   3. Sampling and testing of units where required shall conform to ASTM C140.

B. Regulatory Requirements: Masonry materials and workmanship shall meet requirements of building codes which are applicable to jurisdiction in which Project is located.

1.04 DELIVERY, STORAGE AND HANDLING

A. Transport and handle masonry units in such a manner as to prevent chipping and breakage.

B. Deliver and store materials in dry, protected areas.

1.05 PROJECT/SITE CONDITIONS

A. Hot Weather Requirements:
   1. When ambient air temperature exceeds 100 degrees F., or when ambient air temperature exceeds 90 degrees F. and wind velocity is greater than 8 mph, Masonry Contractor shall implement hot weather protection procedures conforming to ‘Masonry Industry Council’s manual on Hot Weather Construction.
   2. Do not spread mortar beds more than 4 feet ahead of placing block units.
   3. Place block units within one minute of spreading mortar.
   4. See General Structural Notes for Additional Requirements.

B. Field Measurements:
   1. Verify measurements shown on Drawings by taking field measurements.
   2. Proper fit and attachment of concrete unit masonry is required.

1.06 SCHEDULING AND SEQUENCING

A. Coordination: Coordinate with other Trades whose Work relates to concrete unit masonry installation for placing required blocking, backing, furring, conduits and other items.

PART 2 PRODUCTS

2.01 MATERIALS

A. General Requirements for Concrete Unit Masonry:
1. Concrete unit masonry shall meet ASTM C 90, Grade N-I requirements except that when CMU will be exposed in final construction, ASTM C 90 "Visual Inspection" shall be modified to read... "that not more than 3 percent of a shipment contains slight cracks or small chips not larger than 1/2 inch, this shall not be deemed grounds for rejection...".
2. Units shall have a maximum linear shrinkage not to exceed 0.065 of 1% from a saturated oven dry condition by N.B.S. 3079 method of testing.
3. Surface of units shall be clean and free from dirt when laid in walls.
4. Units not complying with appropriate ASTM Standards, as amended by this Specification, shall not be laid in wall where exposed to view and will be rejected and shall be removed and replaced.
5. Provide special block sizes and shapes required or as shown on Drawings.

B. Standard CMU:
1. Sizes as indicated on drawings.

2.02 ACCESSORIES

A. Joint Reinforcing: Ladder type, galvanized steel rods of width 2 inches less than wall thickness conforming to UBC Standard 24-15, Part 1.

B. Reinforcing Steel: As specified under Section 03200 - Concrete Reinforcement.

C. Mortar and Grout: As specified on drawings.

PART 3 EXECUTION

3.01 EXAMINATION

A. Installer shall examine supporting structure and conditions under which unit masonry is to be installed, and notify Contractor, in writing, conditions detrimental to proper and timely completion of Work. Do not proceed with the installation of unit masonry Work until unsatisfactory conditions have been corrected in a manner acceptable to Installer.

B. Do not use units with chips, cracks, or other defects which might be visible in the finished Work unless otherwise acceptable to the Architect.

3.02 PREPARATION

A. Protection: Protect sills, ledges, offsets and other projections from dropping of mortar and grout.

3.03 ERECTION, INSTALLATION, APPLICATION

A. General Requirements for Concrete Masonry Walls:
   1. Workmanship: Provide Custom Level workmanship as defined by AMG Standard 107.
   2. Lay units in uniform and true courses, level and plumb to height indicated on Drawings to tolerances specified in Section 2.3.3.2 of ACI 530.1.
   3. Lay concrete unit masonry in such a way that cracks are not formed at time unit is placed in wall.
   4. Units shall not be wetted before being used and shall be laid dry.
   5. Adjusting Units:
      a. Units shall be adjusted to be level, plumb and straightened into final position in wall while mortar is still soft and plastic enough to ensure a good bond.
      b. Avoid over-plumbing and pounding of corners and jambs to fit stretcher units after they are set in position.
      c. If position of unit is shifted after mortar has stiffened, or bond is broken or cracks are formed, re-lay unit in new mortar.
   6. Bearings on Walls: Provide 3 courses of solid units or grouted hollow masonry units below steel bearing plates or beams bearing on walls. Extend bearings each side of contact with load as required to properly transfer loads into wall.
   7. Openings: Provide openings in masonry walls where required or indicated. Masonry lintels shall be required unless otherwise noted using inverted lintel blocks.
   8. Cutting of masonry: When required, exposed block units shall be cut with a power driven Carborundum or diamond disc blade saw. When using "wet" cutting methods, clean water shall be used on exposed units.
   9. Anchor masonry units facing against or abutting concrete members to concrete by use of dovetailed flat bar anchors inserted in slots built into concrete.
      a. Space anchors not more than 16 inches vertically and 24 inches horizontally.
      b. Maintain a space not less than 1/2 inch width between masonry and concrete members, keeping space free of mortar or other rigid materials so as to permit differential movement.

B. Bonding:
   1. Bond pattern shall be running unless otherwise indicated on Drawings.
   2. Bond shall be plumb throughout face of wall.

C. Mortar Joints:
   1. Joints shall be straight, clean and a uniform 3/8 inch thickness on exposed wall face.
   2. Exposed vertical and horizontal joints shall be tooled to produce a dense, slightly concave surface which is well bonded to block at edges. Joints at scored CMU shall be raked to match block scoring.
   3. Joints shall be struck flush at surface to receive roofing, waterproofing, or finishes requiring flush joints that are to be concealed.
   4. Where interior walls are to receive plaster or other finishes, strike joints flush.
   5. Solidly fill joints from face of unit to depth of face shell, except where specified otherwise.

6. Full bedding to be provided for first course on foundation and wherever maximum strength is required.
7. Butter vertical head joints well and shove these joints tight so that mortar bonds well to both units. See drawings for details.
8. Full coverage to be provided on bed of face shells and webs surrounding cells to be filled. See drawings for details.
9. Bee-holes or other open joints shall be filled and tooled with mortar while mortar is still fresh.
10. Point mortar joints upon completion of Work as required by Architect.

D. Control Joints:
1. Provide control joints at locations indicated on drawings.
2. At bond beams, control joints shall separate both block and grout; however, steel reinforcing at roof and parapet shall be continuous. Intermediate bond beam rebar shall terminate at masonry control joints.
3. Horizontal wire reinforcing shall not run through control joint.
4. Control joints shall not occur at wall corners, intersections, ends, within 24 inches of concentrated points of bearing or jambs or over openings unless specifically indicated on Structural Drawings.
5. Control joint materials shall be held back from finished surface as required to allow for sealant and back-up materials.

E. Horizontal Joint Reinforcing:
1. Place horizontal joint reinforcing every 16 inches vertically throughout wall construction.
2. Continuously reinforce first bed joint immediately above and below openings. Provide reinforcing in second bed joint above and below openings which extends 2 feet beyond each side of opening.
3. Lap reinforcement a minimum of 12 inches at splices.
4. Cut and bend reinforcing at corners.

F. Vertical Reinforcing and Bond Beam Reinforcing:
1. Place all reinforcing in accordance with requirements of Drawings.
2. Vertical Reinforcement: Provide continuous reinforcing full height of wall at wall ends, corners, intersections, jambs of openings and each side of control joints. Vertical reinforcing shall match and lap dowels which are at top of foundation walls and precast concrete beams.
3. Bond Beams: Provide horizontal reinforcing of as noted on Structural Drawings in minimum 8 inch deep grouted continuous bond beam at roof, elevated floor lines and intermediate bond beams.
4. Parapets: Provide horizontal reinforcing of 1 bar in minimum 8 inch deep grouted continuous bond beam at top of parapets or as detailed on drawings.
5. Roof Bond Beam and Parapet Reinforcing at Vertical Control Joints: Place bars continuous through control joint and wrap mastic tape around bars for 16 inches each side of control joint.
6. Bond Beam [and Parapet] Reinforcing at Corners and Wall Intersections: Provide bent bars to match reinforcing at corners and wall intersections.
7. Lap splices in reinforcing per Structural Drawings.
8. Use spacers to position reinforcing steel in center of grout at center of wall as required by code. Positioners shall be utilized at each grout lift.

G. Grouting:
1. Reinforcing steel is to be in place and inspected before grouting starts.

2. Vertical cells to be filled shall have vertical alignment to maintain a continuous cell area.
3. Keep cell to be grouted free from mortar.
4. Fill cells solidly with grout in lifts not to exceed 5 feet.
5. Grout may be poured by hand bucket, concrete hopper or through a grout pump.
6. Do not wet down grout space prior to pouring of grout.
7. Stop pours 1-1/2 inches below top of cell to form a key at pour points. Masonry units shall be laid on course taller than the top bond beam to insure adequate grout coverage over bond beam.
8. Grout shall be consolidated by mechanical vibration during placing before loss of plasticity in a manner to fill grout space. Grout pours greater than 12 inches shall be reconsolidated by mechanical vibration to minimize voids due to water loss. Grout pours 12 inches or less in height shall be mechanically vibrated or rodded.
9. Grout barrier below bond beams shall be continuous wire lath or other approved material. Insulating fill does not constitute a grout barrier.
10. Grout beams over openings and bond beams in a continuous operation.
11. Solidly grout in place bolts, anchors and other items within wall construction.
12. Fully grout or mortar slush jambs and head of metal door frames connected to masonry. Caulk or otherwise seal frames to prevent grout spillage from between frame and masonry.
13. **Use extreme care to prevent grout or mortar from staining face of the masonry.**
14. Immediately remove grout or mortar which is visible on face of masonry.
15. Provide excess non-shrink grout at top of parapets per plans.

H. Provisions for Other Trades and Built-in Items:
1. Build in items required and indicated, including; but not limited to, reinforcing steel, anchors, flashings, sleeves, frames, structural steel, loose lintels, anchor bolts, nailing blocks, door and window frames and miscellaneous iron.
2. Enclosures for pipes, stacks, ducts and conduits:
   a. Construct slots, chases, cavities, and similar spaces as required.
   b. Where masonry is to enclose conduit or piping, bring it to proper level indicated and as directed.
   c. Cover no pipe, conduit chases or enclosures until advised that Work has been inspected and approved.

3.04 FIELD QUALITY CONTROL

A. Tests: Inspection and testing of masonry will be performed by a testing laboratory in accordance with Section 01400.

3.05 ADJUSTING

A. Pointing of Mortar Joints:
1. Point and fill holes and cracks in exposed mortar joints.
2. Cut out defective mortar joints to a depth of at least 1/4 inch .
3. When cutting is complete, remove dust and loose material by brushing or vacuuming.
4. Pre-hydrate mortar for pointing by mixing dry ingredients with only sufficient water to produce a damp mass of such consistency that it will retain its form when it is pressed into a ball with hands, but will not flow under trowel.

5. Allow mortar to stand for a period of not less than one hour nor more than 2 hours, after which re-mix with addition of sufficient water to produce satisfactory workability.
6. Pointing mortars shall be identical to adjacent mortar in similar joints and finish results shall match and be indistinguishable from original mortar used.
7. Pre-moisten joint and apply mortar tightly.
8. Tool to match adjacent joints.
9. Moist cure for 72 hours.

B. Patching: If approved by Architect, patching of exposed masonry walls shall be done at conclusion of general Work and shall conform as closely as possible to similar surrounding or adjoining Work.

3.06 CLEANING

A. Daily Cleaning: Keep walls clean. Soiled masonry from mortar and grout spills which will exposed to view at completion of Project shall be cleaned immediately with stiff fiber brushes until wall is free of dropped or spattered mortar. Failure to execute continuous cleaning or protecting previously laid masonry shall be grounds for stopping of work or denial of payment until corrections are made to the satisfaction of the Architect.

3.07 PROTECTION

A. Protect previously laid masonry from spillage of mortar or grout from subsequent lifts.

B. In hot and dry weather, protect masonry against too rapid drying. When air temperatures exceed 100 degrees F., fog spray masonry every 3 hours for the first 48 hours following erection. **Failure to execute this curing procedure shall require testing and/or rejection of wall at the Contractors expense.** The Architect shall be the sole judge as to acceptability.

C. Bracing and Safety Requirements:
1. Bracing:
   a. Masonry walls over 8 feet in height shall be adequately braced to prevent overturning and to prevent collapse unless wall is adequately supported so that it will not overturn or collapse.
   b. Bracing shall remain in place until permanent supporting elements of structure are in place.
2. Safety: A limited access zone, equal to the height of the wall to be constructed plus 4 feet and running the entire length of the wall, shall be established on the side of the wall which will be un-scaffolded prior to the start of construction of the wall and shall restrict entry only to those employees actively engaged in constructing the wall. No other employees shall be permitted to enter the zone. The limited access zone shall be retained in place until wall is adequately supported to prevent overturning and to prevent collapse; unless the height of wall is over 8 feet, in which case, the limited access zone shall remain in place until wall is braced as specified herein.

END OF SECTION

SECTION 054000

COLD-FORMED FRAMING

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Load-bearing metal stud system for interior framing and load-bearing and non-load bearing exterior framing as shown on Structural Drawings and as specified. Confirm all information below with Structural Drawings.

1.02 SYSTEM DESCRIPTION

A. Design Requirements: Design structural members in accordance with AISI "Specification for the Design of Cold-formed Structural Steel."
   1. Maximum allowable deflection: 1/360 span.
   2. Design system to provide for movement of components without damage, failure of joint seals, undue stress on fasteners, or other detrimental effects when subject to seasonal or cyclic day/night temperature ranges.
   3. Design system to accommodate construction tolerances, deflection of building structural members, and clearances of intended openings.

1.03 QUALITY ASSURANCE

A. Welding: Performed by certified welders in compliance with AWS D.1 Structural Welding Code.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Furnish products of one of the following Manufacturers, except as approved by the Architect, subject to compliance with Specification requirements:
   1. Gold Bond Building Products Div., National Gypsum.
   2. Dietrich Industries
   3. Western
   4. CEMCO

2.02 MATERIALS

A. Studs: "C" type, sizes indicated on Drawings.
   1. ASTM A446, Grade A; ASTM A525, G60 designation galvanized sheet steel.
   2. Minimum structural properties:
      a. 3 5/8 inch stud:
         1) $S_x = 0.49\ in^3$
         2) $I_x = 1.06\ in^4$
      b. 6 inch stud:
         1) $S_x = 0.712\ in^3$
         2) $I_x = 2.226\ in^4$
      c. 8 inch stud:

1) $S_x = 1.068\ in^3$
2) $I_x = 4.462\ in^4$

B. Track: Channel shaped; same width as studs, for tight fit; 18 gage solid web, galvanized or painted to match studs.

C. Bracing, Furring, Bridging: Formed galvanized sheet steel; channel shaped. Provide CRC - 1-1/2 inch x 16 gage bridging for 3-5/8 inch and 4 inch studs; CRC - 2-1/2 inch x 18 gage bridging for 6 inch through 8 inch studs.

D. Plates, Gussets, Clips: Galvanized formed steel, thickness determined for conditions encountered, Manufacturer's standard shapes.

E. Fasteners and Attachments:
1. Sheet metal: Self-drilling self-tapping screws, type appropriate for attachment detail requirements with penetration through joined materials not less than 3 exposed threads.
2. Anchorage devices to structural components: Power driven or powder actuated, drilled expansion bolts, or screws, with sleeves.

F. Joists: "C" Type, sizes indicated on drawings:
1. ASTM A570
2. See General Structural Notes for minimum effective properties.

2.03 FABRICATION

A. Fabricate assemblies of framed sections of sizes and profiles required, with framing members fitted, reinforced and braced to suit design requirements.

B. Fit and assemble in largest practical sections for delivery to site, ready for installation.

PART 3EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine subsurfaces to receive Work and report detrimental conditions in writing to Architect. Commencement of Work will be construed as acceptance of subsurfaces.

B. Coordination: Coordinate with other Work which affects, connects with, or will be concealed by this Work.

3.02 ERECTION

A. Install components in accordance with Manufacturer's instructions.

B. Align floor and ceiling tracks; locate to wall and partition layout. Secure in place with fasteners or welding as indicated on Structural Drawings. Set exterior perimeter bottom runner on sill foam. Interior bottom runners may be sill foam or 30# felt.

C. Place studs at 16 inches o.c.; not more than 2 inches from abutting walls and at each side of openings, and as detailed on Structural Drawings. Connect studs to tracks using fastener method unless noted otherwise.

D. Construct corners using minimum three studs. Double stud at wall opening, door and window jambs, unless noted otherwise on Structural Drawings.

E. Erect load bearing studs one piece full length. Splicing of studs is not permitted.

F. Erect load bearing studs, brace and reinforce to develop full strength to meet design requirements.

G. Extend stud framing through ceiling to underside of floor or roof structure above unless noted otherwise.

H. Blocking: Bolt or screw steel components to studs. Install backing/blocking for support of plumbing fixtures, electrical mechanical and miscellaneous fixtures and equipment, toilet partitions, wall mounted cabinets, toilet accessories, marker/tackboards, wall mounted appliances, door stops, fire extinguishers, hardware, signage, etc. Providing fire draftstop blocking where required by code. Use only mechanical attachments.

I. Coordinate placement of insulation in multiple stud spaces made inaccessible after erection.

J. Install intermediate studs above and below openings to match wall stud spacing.

K. Provide deflection allowance in stud track, directly below horizontal building framing for non-load bearing framing.

L. Attach cross studs or furring channels to studs for attachment of fixtures anchored to walls.

M. Install framing between studs for attachment of mechanical and electrical items, and to prevent stud rotation.

N. Touch-up field welds and damaged galvanized surfaces with primer.

3.03 CLEANING

A. During the course of the Work and on completion, remove and dispose of excess materials, equipment and debris away from premises. Leave Work in clean condition in accordance with Section 01500.

END OF SECTION

SECTION 054500

METAL SUPPORT ASSEMBLIES

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Metal stud framing, furring, suspension systems and accessories as shown on Architectural and Structural Drawings and as specified.

1.02 QUALITY ASSURANCE

A. Perform work in accordance with ASTM C754 requirements.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Furnish products of one of the following manufacturers, except as approved by the Architect, subject to compliance with specifications requirements:
   1. Western Metal
   2. Allied Studco
   3. Dietrich Industries
   4. Cemco

2.02 MATERIALS (Also see Structural Drawings)

A. Studs, Joists, Runners and Furring Channels:
   1. ASTM C645, electro-galvanized to meet ASTM A591.
   2. Thickness: SC 20 gauge for studs, joists and runners, and IC 25 gauge for furring channels, unless noted otherwise on Structural Drawings.

B. Studs: C-shaped, non-load bearing rolled steel, punched for utility access, of size shown on Drawings.

C. Resilient channels shall be 25 gauge RC-1 channels as manufactured by USG or equal.

D. Ceiling Runners: Cold or hot-rolled steel, meet ASTM C754.

E. Hanger and Tie Wire: Meet ASTM C754.

F. Furring and Bracing Members: Of same gauge, material and finish as studs, thickness to suit purpose.

G. Clips, Brackets: Galvanized wire or sheet metal designed for attachment of furring members.

H. Backing Plates: Flush mount 6" X 14 ga. equal to " Flush Mount' or "Notch-tite" as manufactured by Metal-Lite or equal. Use 'Danback" flexible wood backing at handrails, casework, wall stops or wall fixtures as manufactured by 'Dietrich or equal.

I. Utility Angles: Use us connect, reinforce or secure metal stud framing in various drywall corner applications where required.

J. Slotted Runner: “Slotted Track” as manufactured by Metal Lite or equal. At all Non-Load bearing full height walls. Load-Bearing walls shall be installed per Structural Drawings.

K. Radius Runners and Headers: “Flex-C Trac System’ as manufactured by Flex-ability Concepts

L. Fire Blocking and Bridging: 20 ga. Solid component as manufactured by Metal Lite or equal.

M. Fasteners: GA 203, self-drilling, self-tapping screws. Use USG Selector Guide for the proper type screws and spacing in the latest edition of Gypsum Construction Handbook. Screws shall comply with ASTM 646.

N. Anchorage Devices: Power driven

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that conditions are ready to receive work.

B. Verify field measurements are as shown on Drawings.

C. Verify that rough-in utilities are in proper location.

3.02 METAL STUD ERECTION

A. Install stud framing in accordance with ASTM C754 and as indicated on Structural Drawings.

B. Attach steel runners at floor over 30# felt or sill foam with ‘Hilti’ o.145 dia. X 1-1/2" long ramset pin anchors located 6" from each end and spaced maximum 24" apart. Attach runners at ceiling to structural elements with suitable fasteners located 6" from each end and spaced maximum 24" apart.

C. Position studs vertically, engaging floor and ceiling runners and spaced 16" oc. When necessary, splice studs with 8" nested lap and one positive attachment per stud flange. Place studs in direct contact with all door frame jambs, abutting partitions, partition corners and existing construction elements. Install felt strips between wall and stud where studs abut exterior walls.

D. Install double studs at door frame jambs. Anchor all studs adjacent to door and window frames, partitions intersections, and corners to ceiling and floor runner flanges with metal lock fasteners tool.

E. Bridge stud partitions at mid-height with 1 1/2" channels through studs, secured in place. Lap channels by nesting on inside the other to a depth of at least 8" and wire tie together.

F. Full height, non-bearing frame walls attaching to roof deck shall have slotted top runner screwed to metal deck. Bearing walls attached to roof deck shall have solid runners, sized and secured as indicated on Structural Drawings. Walls to above ceiling line only and not connected with a rigid ceiling shall be braced to roof structure at 4'-0" o.c. with splayed studs at approximately 45 deg., where abutting partitions do not occur within 6'-0".

G. Metal furring channels shall be attached vertically spaced 16" oc., to masonry or concrete surfaces with hammer-set or power-driven fasteners or concrete stub nails staggered 24" oc. on opposite flanges. Nest channels 8' at splices and anchor with two fasteners at each wing. When furring channel is installed directly to exterior wall, install asphalt felt protection strip between the channel and the wall.

H. Blocking: Bolt or screw steel components to studs. Install backing/blocking for support of plumbing fixtures, electrical mechanical and miscellaneous fixtures and equipment, toilet partitions, wall mounted cabinets, toilet accessories, marker/tackboards, wall mounted appliances, door stops, fire extinguishers, hardware, signage, etc. Providing fire draftstop blocking where required by code. Use only mechanical attachments.

I. Coordinate installation of bucks, anchors, blocking, electrical and mechanical work placed in or behind partition framing.

J. Construct corners using minimum three studs.

K. Brace stud framing system and make rigid.

L. Refer to Drawings for indication of partitions extending to ceiling only and for partitions extending through ceiling to structure above. Maintain clearance under structural building members to avoid deflection transfer to studs. Provide extended leg ceiling runners.

M. Coordinate placement of insulation in multiple stud spaces made inaccessible after stud framing erection.

3.03 CLEANING

A. During the course of the Work and on completion of the Work, remove and dispose of excess materials, equipment and debris away from premises. Leave Work in clean condition in accordance with Section 01500.

END OF SECTION

SECTION 055000

METAL FABRICATIONS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Miscellaneous metal as shown on Drawings and as specified, including items fabricated from iron and steel shapes, plates, bars, strips, tubes, pipes and castings which are not a part of structural steel or other metal systems in other Sections of these Specifications.

1.02 SUBMITTALS

A. Shop Drawings: Submit Drawings for the fabrication and erection of assemblies of Miscellaneous Metal Work, which are not completely shown by the Manufacturer's data sheets.
   1. Include plans and elevations at not less than 1 inch to 1'-0" scale and include details of sections and connections at not less than 3 inches to 1'-0" scale.
   2. Show anchorage and accessory items.

1.03 QUALITY ASSURANCE

A. Standards: Comply with the following, except as otherwise shown and specified:
   1. AISC "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings."
   2. AISI "Specifications for the Design of Cold-Formed Steel Structural Members."
   3. AWS "Structural Welding Code-Steel."
   4. ASTM A6 "General Requirements for Delivery of Rolled Steel Plates Shapes, Sheet Piping and Bars for Structural Use."

B. Qualifications: Qualify welding processes and welding operators in accordance with AWS "Standard Qualification Procedure."

PART 2 PRODUCTS

2.01 MATERIALS

A. Steel Plates, Shapes and Bars: ASTM A36. ASTM A992 for 'W' shapes.

B. Steel Bars and Bar-size Shapes: ASTM A36.

C. Steel Tubing (Not-formed, Welded or Seamless): ASTM A500, Grade B (Fy = 46,000 psi)

D. Cold-Finished Carbon Steel Bars: ASTM A108, Grade as selected by fabricator.

E. Hot-dip Galvanized Steel Sheets: ASTM A526, with ASTM A525, G90 zinc coating.

F. Steel Pipe: ASTM A53, type as selected; Grade A. Black finish unless galvanizing is required. Standard weight, Schedule 40, unless otherwise shown or specified.

G. Anchors:
   1. Masonry Anchorage Devices: Expansion shield, FS FF-S-325.
   2. Toggle bolts: Tumble-wing type, FS FF-B-588; type, class and style as required.
   3. Threaded-type concrete inserts: Galvanized ferrous castings, internally threaded to receive 3/4 inch (19mm) diameter machine bolts; either malleable iron complying with ASTM A47 or cast steel complying with ASTM A27; hot-dip galvanized in compliance with ASTM A153.

H. Fasteners: Provide zinc-coated fasteners with galvanizing complying with ASTM A153 for exterior use or where built into exterior walls. Select fasteners for the type, grade and class required for the installation of miscellaneous metal items.
   1. Bolts and nuts: ASTM A307, Grade A, regular hexagon head.
   2. Bolts, hexagon and square: ANSI B-18.2.1.
   3. Bolts, round head: ANSI B-18.5.
   4. Lag bolts: FS FF-B-561, square head type.
   5. Wood screws: ANSI B-18.6.1, flat head carbon steel.
   6. Plain washers: FS FF-W-84, helical spring type carbon steel.

I. Rusty steel: Steel noted on drawings as 'Rusty Steel' shall be wiped clean of mill oils and shall remain free of any finish to oxidize.

J. Paint:
   1. Metal Primer: VOC compliant.
      a. Interior Steel: Tnemec 10-99W (white).
      b. Exterior Steel (exposed): Tnemec-Zinc 90-97.

2.02 ACCESSORIES

A. Inserts and Anchorages: Furnish inserts and anchoring devices to be set in concrete or built into masonry for installation of Miscellaneous Metal Work. Provide setting Drawings, templates, instructions and directions for installation of anchorage devices.

2.03 FABRICATION

A. General: For fabrication of Miscellaneous Metal Work which will be exposed to view, use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names and roughness. Remove such blemishes by grinding or by welding and grinding, prior to cleaning, treating and application of surface finishes, including zinc coatings.

B. Shop Assembly: Preassemble items in shop, when possible, to minimize field splicing and assembly of units at the site. Disassemble units only to extent necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.

C. Workmanship:
   1. Use materials of the size and thickness shown, or if not shown, of the required size and thickness to produce adequate strength and durability of the finished product for the intended use. Work to the dimensions of fabrication and support. Use type of materials shown or specified for various components of Work.
   2. Form exposed Work true to line and level with accurate angles, surfaces and straight sharp edges. Ease exposed edges to a radius of approximately 1/32 inch unless otherwise shown. Form bent-metal corners to the smallest radius possible without causing grain separation or otherwise impairing the Work.

3. Weld corners and seam continuously and in accordance with the recommendations of AWS. Grind exposed welds smooth and flush to match and blend with adjoining surfaces.
4. Form exposed connections with hairline joints which are flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of the type shown, or if not shown, use Phillips flat-head (countersunk) screws or bolts.
5. Provide for anchorage of type shown, coordinated with supporting structure and the progress schedule. Fabricate as required to provide adequate support for the intended use of the Work.
6. Cut, reinforce, drill and tap Miscellaneous Metal Work as may be required to receive finish hardware and similar items of Work.
7. Use hot-rolled steel bars for Work fabricated from bar stock, unless Work is indicated to be fabricated from cold-rolled, or cold-finished stock.

D. Loose Bearing Plates: Provide loose bearing plates for steel items bearing on masonry or concrete construction, made flat, free from warps or twists, and of required thickness and bearing area. Drill plates to receive anchor bolts and for grouting as required.

E. Miscellaneous Framing and Supports:
1. Provide miscellaneous steel framing and supports which are not a part of the structural steel framework, as required to complete Work.
2. Fabricate miscellaneous units to sizes, shapes and profiles shown, or if not shown, of the dimensions required to receive adjacent grating, plates, doors or other Work to be retained by the framing. Except as otherwise shown, fabricate from structural steel shapes and plates and steel bars of all welded construction using mitered corners, welded brackets and splice plates, and a minimum number of joints for field connection. Cut, drill and tap units to receive hardware and similar items to be anchored to the Work.
3. Equip units with integrally welded anchor straps for casting into concrete or building into masonry wherever possible. Furnish inserts if units must be installed after concrete is poured. Except as otherwise shown, space anchors 24 inches o.c., and provide minimum anchor units of 1-1/4 inch x 1/3 inch x 8 inch steel straps.

2.04 FINISHING

A. Shop Painting:
1. Shop paint Miscellaneous Metal Work, except those members or portions of members to be embedded in concrete or masonry, surfaces and edges to be field welded, and galvanized surfaces, unless otherwise indicated.

PART 3EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine subsurfaces to receive Work and report detrimental conditions in writing to Architect. Commencement of Work will be construed as acceptance of subsurfaces.

B. Coordination: Coordinate with other Work which affects, connects with, or will be concealed by this Work.

3.02 PREPARATION

A. Clean and strip primed steel items to bare metal where site welding is required.

B. Supply items required to be cast into concrete or embedded in masonry with setting templates to appropriate Trades.

3.03 INSTALLATION

A. Install items plumb and level, accurately fitted, free from distortion or defects.

B. Allow for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.

C. Field weld components indicated on Shop Drawings.

D. Perform field welding in accordance with AWS D1.1.

E. After erection, prime welds, abrasions, and surfaces not shop primed and galvanized members, except surfaces to be in contact with concrete.

3.04 ERECTION TOLERANCES

A. Maximum Variation from Plumb: 1/4 inch (6mm) per story, non-cumulative.

B. Maximum Offset from True Alignment: 1/4 inch (6mm).

3.05 CLEANING

A. During the course of the Work and on completion, remove and dispose of excess materials, equipment and debris away from premises. Leave Work in clean condition in accordance with Section 01500.

END OF SECTION

SECTION 061000

ROUGH CARPENTRY

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Rough carpentry, including rigid sheathing, as shown on the Drawings and as specified herein.

1.02 QUALITY ASSURANCE

A. Identify each piece of lumber or plywood used for structural framing with grade and trade mark of a lumber grading organization. Trade mark of manufacturer shall also appear on each piece.

B. Grading Rules: Conform with applicable requirements of American Lumber Standards "Simplified Practice Recommendation R-16" and to grading rules of manufacturer's association under whose rules the lumber is produced.

C. Standards: Conform with requirements of American Plywood Association, U. S. Dept. of Commerce Commercial Standards and American Wood Preservers Association Standards, as they apply.

PART 2 PRODUCTS

2.01 LUMBER MATERIALS (Also See General Structural Notes on Drawings)

A. Species: Douglas Fir graded in accordance with Standard Grading and Dressing Rules of WCLIB. Framing lumber shall be stress grade. All sides shall be surfaced.

B. Lumber Grades: As follows unless noted differently on the Structural Drawings:
1. One inch boards: Construction.
2. 2x4 studs, sills, plates, etc.: "1500 f Industrial".
3. Other framing lumber, 2 to 4 inches thick: Number 2 or better.
4. Beams, 5 inches and over in least dimension: Number 1 or better.
5. Beams, where so noted on Drawings: Select Structural.
6. Posts and columns, 5 inches and over in least dimensional: Select Structural.
7. Misc. blocking, bridging, etc: Utility.

C. Moisture Content: Lumber shall be air-dried or kiln-dried. At time of installation, moisture content, expressed as a percentage of the weight of the oven-dry wood, shall not exceed 19 percent for lumber of up to two inch nominal thickness and 15 percent for exterior trim and siding. Moisture content of lumber over two inches nominal thickness shall conform to the rules of the association under which it is graded.

2.02 SHEATHING MATERIALS

A. Plywood: Each panel of softwood plywood shall be identified with the APA grade-trademark and shall meet the requirements of PS-1-83 for softwood plywood. Shall be treated where noted on drawings.

B. Plywood which has an edge or surface permanently exposed to the weather shall be exterior type. Panel thickness and identification index shall be as shown on the Drawings and as specified and shall also be stamped on each piece of plywood.

2.03 FACTORY WOOD TREATMENT

A. Wood sill plates and ledgers bolted in direct contact with concrete or masonry, located at or below grade only shall be pressure treated with CCA type treatment equal to Koppers Co. "Wolman CCA" in accordance with UBC Standard 25-12.

2.04 ACCESSORIES

A. Nails: Common wire, galvanized for exterior Work, meeting FS FF-N-101 of the sizes indicated on the Drawings.

B. Screws: Standard domestic manufacture, bright steel, except galvanized for exterior use and of brass, bronze, aluminum or stainless steel when used to attach items made of those materials. Screws used for attaching interior trim and finish to drywall partitions shall be Type S self-drilling, self-tapping anodized steel drywall screws.

C. Bolts: Standard mild steel, square head machine bolts with square nuts and malleable iron or steel plate washers or carriage bolts with square nuts and cut washers as indicated. Bolts, nuts and washers, wholly or partially exposed on exterior shall be galvanized.

D. Bolts: Machine bolts, or carriage bolts if noted on Drawings, of structural grade steel with square nuts, of sizes noted on Drawings, conforming to ASTM A307.

E. Steel plates and angles: ASTM A36, galvanized after fabrication.

F. Lag screws, sheer plates and split ring connectors: Conform to requirements of the "National Design Specifications for Stress Grade Lumber and its Fastenings" of National Forest Products Association.

G. Framing anchors, joist hangers, etc.: Simpson Company products or similar devices as approved by Architect and noted on Drawings.

H. Power driven inserts: Ramset, or as approved by Architect meeting FS GGG-D-777a. Install as per manufacturer's printed directions. Charge shall be powerful enough to prevent spalling of concrete.

PART 3 EXECUTION

3.01 FRAMING

A. Coordination: Install wood framing making proper provisions for Work of other trades. Cut wood required to accommodate plumbing, heating and ventilating, electrical and other trades. Fit neatly around exposed items, as outlet boxes, conduit, pipes and ducts. Protect adjacent Work. Before proceeding with rigid sheathing, make certain required inspections have been made.

B. Structural Members: No cutting, notching or drilling without prior approval of the structural engineer through the Architect.

C. Wood Backing: Provide wood backing for grab bars, appliances, fixtures, door stops, marker boards, etc. Provide furring, stripping or blocking indicated or required for installation and attachment of work of other trades.

D. Connections: Subdrill where necessary to avoid splitting.

E. Bolts: Drill bolt holes 1/32 inch larger than bolt diameter. Use square plate or malleable iron washers under heads and nut where they bear against wood. Re-tighten bolts immediately prior to concealing with finish materials. Re-tighten exposed bolts immediately prior to final inspection.

F. Lag Screws and Screws: Subdrill, use square plate or malleable iron washer under lag screw heads when they bear on wood.

G. Exterior base plates or sills resting on concrete: Set treated plates on sill foam or 30# roofing felt. Size plates or sills and set level and true to line. Bolt down with bolts of size, length and spacing indicated with a bolt not more than 12 inches from the end of any piece.

H. Rough framing: Fit closely, set accurately to required lines and levels, and secure rigidly in place. Set horizontal and inclined members with crown edge up. Reinforce cut members as directed. Bolt, nail and spike in a thorough manner with not less than the sizes and quantities indicated or specified. Structural members shall provide full contact at bearing surfaces.

I. Studs: Wall and partitions shall be nominal 2x4 and 2x6 studs 16 inches on center unless otherwise noted or unless they are required to be larger to accommodate mechanical or electrical equipment, piping and fixtures or fixtures or equipment of any other Trade. Unless otherwise detailed, panels, valve covers, cleanouts, devices, access doors, recessed cabinet boxes, etc., shall be mounted flush with the adjacent wall surface. When any such item is of a depth where it is not practical to use solid studding to the full thickness of the wall, then the wall shall be furred. When furring is required, it shall extend the full width and from floor to roof or ceiling joists. The studs comprising interior partitions and the wall material affixed thereto shall extend from floor to roof or ceiling joist framing except as shown. Staggered stud walls shall be constructed where shown on plans and as detailed.

J. Top plates in bearing partitions: Shall be doubled and lapped at each intersection with walls or partitions. Stagger joints in upper and lower members of top plate not less than 4 feet.

K. Provide blocking not less than 2 inches in thickness of same width as stud as follows:
   1. Stud partitions or walls more than 8 feet, but not more than 14 feet in height: One row of blocking fitted snugly and nailed into mid-height of stud.
   2. Walls or partitions over 14 feet in height: 2 or more rows of blocking. Locate rows of blocking so that in no case will the distance between sole or top plates and blocking or between lines of blocking exceed 8 feet.
   3. Provide solid fire blocking at ceiling line at dropped ceilings.

L. Frame corners solid where stud walls or partitions meet or as shown on the Structural Drawing.

M. Provide double joists under partitions parallel to joists, and for headers and side members at openings larger than 4 feet in dimension.

N. Joist framing into headers and header joists shall be supported on joist hangers.

O. Provide wood stripping where indicated for attachment of finish materials to wood surfaces.

P. At roofs: Provide crickets, cants, equipment curbs, wood saddles, cant strips, curbs for plywood at parapet walls; other miscellaneous backing, blocking, curbing, and wood nailers bolted to tops of concrete or masonry and at expansion joints, as specified or required.

3.02 PLYWOOD SHEATHING

A. Plywood sheathing: Install plywood sheathing with long dimension perpendicular to joints. Install wall sheathing with long dimension horizontally.

B. Plywood sheathing shall have edges blocked and nailed for diaphragm or shear wall stresses as shown on the Drawings.

C. Plywood shall be laid with the "C" or best face on exposed side. At non-tongue and groove sheathing, provide plywood clips at 24 inches O.C. maximum at unsupported or unblocked edges.

3.03 CLEANING

A. During the course of the Work and on completion, remove excess materials, equipment and debris and dispose of away from premises. Leave Work in clean condition in accordance with Section 01500.

END OF SECTION

SECTION 064100

ARCHITECTURAL CASEWORK

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Architectural Casework as shown on Drawings and as specified herein.

1.02 SUBMITTALS

A. Shop Drawings: Submit fully dimensioned shop drawings showing layout, elevations, sections, hardware, construction details and schedule of finishes.

B. Submit color samples of plastic laminate and solid surface tops from manufacturer's standard colors. Solid Surface colors to include up to price group 4, color to be selected by Architect.

1.03 QUALITY ASSURANCE

A. Standards: Comply with the following:
   1. Latest Edition, AWI 400 Division B Premium Grade Laminate Clad "Quality Standards" for woodwork quality.
   2. NEMA for plastic laminates.
   3. Cabinetry shall be fabricated for long life under hard use.

B. Fabricator Qualifications: Minimum of three years documented experience specializing in manufacturing of the products as specified in this Section. Experience to be similar in scope and complexity to this project. Currently certified by the manufacturer as an acceptable fabricator.

C. Installer Qualifications: Minimum of three years documented installation experience for projects similar in scope and complexity to this project, and currently certified by the manufacturer as an acceptable installed. Installer to be the Fabricator.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Storage and Protection: Store materials protected from exposure to harmful weather conditions, at temperature and humidity conditions recommended by the manufacturer.

PART 2 PRODUCTS

2.01 MATERIALS

A. Plastic Laminate: NEMA LD3, GP-50 General Purpose type; color, pattern, and surface texture to be selected by Architect from manufacture color line. Allow for multiple color usage.
   a. Laminate Backing Sheet: 0.020 inch backing sheet grade, undecorated plastic laminate.
   b. Particle Board: 3/4" thick industrial grade, medium density, ANSI A 208.1 Grade 1M3.
   c. Melamine Panels: 3/4" thick complying NEMA LQ-1-1977, double sided.

d. Acceptable Manufacturers:
    i. Wilsonart
    ii. Formica
    iii. Panolam

B. Solid Surface Countertops:
    a. Acceptable Manufacturers:
        i. LG
        ii. Samsung
        iii. Formica
        iv. Wilsonart
    b. Color: Color to be selected by architect from manufacturer's standard color line up to price group C/4.
    c. Thickness: Solid surface material to be 1/2" thick. Countertops to be built-up to achieve thickness indicated in construction drawings.

2.03 ACCESSORIES

A. Adhesive: Type recommended by Laminate and Solid Surface Manufacturer to suit application.

B. Wall Adhesive: Cartridge type compatible with paneling and wall substrate.

C. Edge Trim: Extruded convex or flat shaped 3 mil PVC; smooth finish; self locking serrated tongue; of width to match component thickness; color as selected.

2.04 HARDWARE

A. 5 mm hole system with double post locking shelf clip.

B. Drawer and Door Pulls: Brushed aluminum wire type and flush cup aluminum where indicated.

C. Drawer and Slides: Grass 6036 or Blum Metabox Pullout drawer 340 M with ZSF 2600 front bracket. Provide Metafile rail system where indicated as file drawer on drawings.

D. Cabinet Hinges: Concealed Euro style.

E. Locks: National #N8173, or N8178 with inter-changable cores. Flush mounted. Key alike within each room. Each room to be keyed differently. Key differently each locker at Corridor 133 with master key.

2.05 FABRICATION

A. Fabricate architectural woodwork and cabinets in conformance with AWI Premium Grade Standards. All units shall have solid backs.

B. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.

C. All components shall have plastic laminate over industrial grade particle board for exteriors and thermoset melamine for interiors. All panels shall be balanced with high pressure laminate both sides using PVA glue. Units shall have 3/4" exterior B-C grade plywood base for applied rubber base by others.

D. Cap exposed plastic laminate finish edges of doors and drawers with 3 millimeter PVC edges. All others with plastic laminate to match.

E. Door and Drawer Fronts and Tops: 3/4 inch thick flush overlay style. Unless otherwise noted, top shall be flush with sides and doors and drawer fronts. Provide rolled tops and overhangs where indicated.

F. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trim for scribing and site cutting.

G. Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet from sink cut-outs.

H. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.

I. Provide cutouts for appliances, outlet boxes, trash drops, fixtures and fittings. Provide cable holes with colored grommets where indicated and as requested by Owner. Seal contact surfaces of cut edges.

PART 3EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine sub-surfaces to receive Work and report detrimental conditions in writing to Architect. Field verify all dimensions including plumbing fixture stub-outs for possible conflicts.

B. Coordination: Coordinate with other Work which affects, connects with, or will be concealed by this Work. Coordinate sizes, cut-outs and supports for plumbing, electrical or other equipment or appliance provisions.

3.02 INSTALLATION

A. Set and secure cabinetry and other woodwork in place; rigid, firm and secure, plumb and level, and in accordance with AWI Section 1700 for long life under hard use.

B. Use fixture attachments in concealed locations for wall mounted components.

C. Secure and align adjoining cabinet units and counter tops with concealed joint fasteners.

D. Scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.

E. Secure cabinet and bases to floor using appropriate angles and anchorages.

F. Install trim in single lengths without splices where possible. Miter external corners and cope internal corners.

G. Coordinate with Electrical Contractor and provide for routing of flex conduit and electrical provisions

END OF SECTION

SECTION 071500

MASONRY STAINING AND TRANSPARENT FINISHING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes: Stain coating applied to exterior/interior surfaces.

1.2 SUBMITTALS

A. Certifications: Submit manufacturer's certification of conformance to specified surface preparation and application rates.

B. Contract Closeout Submittals: Submit Letter of Certification under provisions of appropriate close out section.

1.3 QUALITY ASSURANCE

Qualifications: Manufacturer: Company specializing in manufacturing Products specified with minimum 5 years documented experience.
Applicator: Company specializing in performing the work of this Section with minimum 5 years documented experience.

A. Regulatory Requirements: Comply with applicable rules and regulations of Pollution-Control Regulatory Agency having jurisdiction regarding volatile organic compounds (VOC) and use of hydrocarbon solvents.

B. Field Samples: See Section 014000 – Quality Assurance for mockup requirements.
Coverage rate for entire project shall be that which is used to for the mock-up sample passing review.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Protect coating liquid from freezing.

1.5 PROJECT CONDITIONS

A. Environmental Requirements: Do not apply Product during the following conditions:
Both ambient and surface temperatures are below 40 degrees F.
Substrate surfaces have cured less than 30 days.
Rain or temperatures below 40 degrees F are predicted for a period of 24 hours.
Surface moisture readings as measured by an electronic moisture meter exceed 20%.

1.6 WARRANTY

General contractor must provide a written manufacture's warranty prior to project completion. Said warranty from manufacturer will include replacement of materials to repair any deficiencies reported for a period of no less than five (5) years. Said warranty must be in writing from the coatings manufacturer. Applicator must provide a one year performance and workmanship warranty for one year.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with project requirements, the following manufacturer may be used, or equal by another manufacturer.

Rainguard International, Newport Beach, CA 888-765-7070.

2.2 MATERIALS

Description: Pigmented penetrating stain comprising of acrylic, silane, siloxane, waterborne and VOC compliant.

Products: Rainguard: Color-Lok Semi-Transparent

Colors: To match COLORS AS SELECTED.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces and adjacent areas where products will be applied and verify that surfaces conform to specifications and manufacturer's requirements for substrate conditions. Do not proceed until satisfactory conditions have been corrected.

B. Verify joint sealants are installed and cured.

C. Beginning of application indicates acceptance of substrate conditions.

3.2 PREPARATION

A. Surface cracks, holes, or other imperfections that exceed 1/64 of an inch shall be filled with pointing mortar. Masonry joints found to be unsound, hollow, or otherwise defective shall be raked out to a depth of 1/2 inch and pointed with mortar.

B. Remove loose particles and foreign matter. Remove oil or foreign substance with a cleaning agent which will not affect coating.

C. Scrub and rinse surfaces with water, and let thoroughly dry.

D. Protect adjacent surfaces not scheduled to receive coating. If applied on unscheduled surfaces, remove immediately, by approved method.

E. Protect landscaping, property, and vehicles from over spray and drift.

3.3 APPLICATION

A. Do not apply until masonry mortar is cured for at least seven days.

B. Apply coating in accordance with manufacturer's published instructions, using appropriate method and coverage rate.

3.4 FIELD QUALITY CONTROL

Manufacturer's Field Services: Provide services of a manufacturer-authorized technical service representative to inspect and approve the substrate before application, to instruct the applicator on the product and application method to be used, and to field test the in-place surfaces after application.

A. Furnish written certification that surface preparation and rate of application is completed in accordance with specification requirements and the manufacturer’s recommendations.

3.5 CLEANING

A. Immediately clean stain from adjoining surfaces soiled or damaged by stain application as work progresses.

B. Repair damage caused by stain application.

C. Comply with manufacturer's published instructions for cleaning.

END OF SECTION

SECTION 072100

BUILDING INSULATION

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Thermal and acoustical insulation work as shown on Drawings and as specified.

1.02 QUALITY ASSURANCE

A. Regulatory Requirements: Conform to applicable code for fire resistance ratings and surface burning characteristics.

B. Provide certificate of compliance from authority having jurisdiction indicating approval of combustibility.

1.03 DELIVERY, STORAGE AND HANDLING

A. Delivery and Storage: Deliver materials to job in Manufacturer's original unopened packaging. Adequately protect against damage while stored at the site. Deliver so that stocks of materials on the site will permit uninterrupted progress of the Work.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Furnish products of one of the following Manufacturers, except as approved by the Architect, subject to compliance with Specification requirements:
1. Manville
2. Owens-Corning Fiberglas Corp.
3. The Dow Chemical Co.
4. Certainteed

2.02 MATERIALS

A. Batt Insulation: ASTM C 665, Class C, glass fiber batts. Install Type II kraft faced at exterior wall locations, Type I unfaced at interior walls and attic spaces locations, with resistance values as indicated on the Drawings, for various locations. Batts shall be a single thickness to meet the required R value noted on Drawings. Multiple layers of batts will not be accepted unless R-value not manufactured in single thickness.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine subsurfaces to receive Work of this Section. Report in writing to General Contractor, with a copy to Architect, any conditions detrimental to Work of this Section. Failure to observe this injunction constitutes a waiver to any subsequent claims to the contrary and will make Insulation Contractor responsible for any corrections the Architect may require. Commencement of Work will be construed as acceptance of subsurfaces.

3.02 INSTALLATION

A. Batt Insulation:
   1. Apply no insulation until such time as the Construction has progressed to the point that inclement weather will not damage or wet the insulation material.
   2. Fully insulate small areas between closely spaced framing members, pipes, conduits or other obstruction by cutting and fitting insulation material as required to maintain the integrity of the insulation.
   3. Batt insulation at metal studs, and other non-nailable members shall be installed friction fit with vapor barriers in and flanges continuously tight against framing members.
   4. End matching neatly with ends fitting snugly or overlapped.
   5. Insulation laid over suspended acoustical ceilings shall be 2' X 6' maximum length.

3.03 CLEANING

A. During the course of the Work and on completion of the Work, remove excess materials, equipment and debris and dispose of away from premises. Leave Work in clean condition in accordance with Section 01500.

B. Protection: Take precautions to protect insulation, both during and after installation, from damage of any kind until covered.

END OF SECTION

072600
UNDER-SLAB VAPOR BARRIER

PART 1 – GENERAL

1.1 SUMMARY

A. Products supplied under this section:
1. Vapor barrier, seam tape, and mastic for installation under concrete slabs.

B. Related sections:
1. Section 03 30 00 Cast-in-Place Concrete

1.2 REFERENCES

A. American Society for Testing and Materials (ASTM):
1. ASTM E 1745-09 Standard Specification for Plastic Water Vapor Retarders Used in Contact with Soil or Granular Fill Under Concrete Slabs.
2. ASTM E 154-99 (2005) Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.
3. ASTM E 96-05 Standard Test Methods for Water Vapor Transmission of Materials.
4. ASTM F 1249-06 Standard Test Method for Water Vapor Transmission Rate Through Plastic Film and Sheeting Using a Modulated Infrared Sensor.
5. ASTM E 1643-09 Selection, Design, Installation, and Inspection of Water Vapor Retarders Used in Contact with Earth or Granular Fill Under Concrete Slabs.

B. American Concrete Institute (ACI):
1. ACI 302.2R-06 Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials.

1.3 SUBMITTALS

A. Quality control/assurance:
1. Summary of test results as per paragraph 8.3 of ASTM E 1745.
2. Manufacturer's samples, literature.
3. Manufacturer's installation instructions for placement, seaming and penetration repair instructions.

PART 2 – PRODUCTS

2.1 MATERIALS

A. Vapor barrier must have all of the following qualities:
1. Permeance of less than 0.01 Perms [grains/(ft^2 · hr · inHg)] as tested in accordance with ASTM E 1745 Section 7.
2. Other performance criteria:
   a. Strength: ASTM E 1745 Class A.
   b. Thickness: 15 mils

B. Vapor barrier products:
1. Basis of Design: Stego Wrap Vapor Barrier (15-mil) by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.

2.2 ACCESSORIES

A. Seam tape:
1. Stego Tape by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.

B. Vapor-proofing mastic:

1. Stego Mastic by Stego Industries LLC, (877) 464-7834 www.stegoindustries.com.

PART 3 – EXECUTION

3.1 PREPARATION

A. Ensure that base material is approved by Architect or Geotechnical Engineer.
   1. Level and compact base material.

3.2 INSTALLATION

A. Install vapor barrier in accordance with manufacturer's instructions and ASTM E 1643.
   1. Unroll vapor barrier with the longest dimension parallel with the direction of the concrete placement.
   2. Lap vapor barrier over footings and/or seal to foundation walls.
   3. Overlap joints 6 inches and seal with manufacturer's tape.
   4. Seal all penetrations (including pipes) per manufacturer's instructions.
   5. No penetration of the vapor barrier is allowed except for reinforcing steel and permanent utilities.
   6. Repair damaged areas by cutting patches of vapor barrier, overlapping damaged area 6 inches and taping all sides with tape.

END OF SECTION

SECTION 075113

BUILT-UP ASPHALT ROOFING

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Built-up mineral-surfaced asphalt roofing as shown on Drawings and as specified.

1.02 SUBMITTALS

A. Submit manufacturers installation directions for installation of all components over insulated deck for Architects review prior to roofing installation.

B. Maintenance: Submit 2 copies of roofing manufacturer's maintenance instructions.

1.03 QUALITY ASSURANCE

A. Qualifications: Applicator with minimum of 5 years experience and approved by the materials manufacturer.

B. Pre-installation Conference:
1. Convene a job-site meeting to review roofing specifications and installation proceedures with the Architect, Contractor, Roofing installer, sheet metal installer, and manufacturer's representative at the inception of the work.
2. Notify Architect at least 48 hours prior to starting Work.

C. Because the sheet metal is an integral part of the roofing assembly, the roofing contractor is responsible for the work and assuring that the total assembly complies with the specified requirements. Coordinate roof accessories and assure weathertight installation of all components.

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to job site in manufacturer's original unopened packaging with labels intact. Fully protect against wetness or damage while temporarily stored. Materials designated for a specific application shall be the products of one manufacturer.

B. Materials stockpiled or located on roof areas shall be safely stored away from roof edges and properly secured to prevent wind damage/blowoff. The materials shall be distributed in such a manner that they will not overload the structure at any location, beyond its capacity.

1.05 PROJECT/SITE CONDITIONS

A. Environmental Requirements: Conduct no roofing operations when water in any form is present on the deck or when materials are damp, wet or likely to be wetted by the elements.

1.06 WARRANTY

A. Warranty: Furnish written full value warranty for a period of twenty (20) years from final completion of the Work, which covers repairs necessary to maintain roofing Work in a watertight condition during the warranty period.

PART 2 PRODUCTS

A. Furnish products of one of the following manufacturers, or as prior approved by the Architect, subject to compliance with specifications requirements:
   1. GS Roofing Products
   2. Johns Manville Roofing Systems
   3. Owens-Corning Fiberglas
   4. GAF Materials Corporation

B. Specifications are based on Johns Manville Roofing Systems.

2.02 MATERIALS

A. Mineral Surfaced Roofing System over rigid insulation shall be Manville specification No. 4GIC, with a summary of materials per 100 sq. ft. as follows:
   3. GLASPLY PREMIER (3 ply)
   4. GLASKAP MINERAL SURFACED CAP SHEET (1 ply)

B. Cant Strips: Shall be rigid core fiberboard and shall comply with F.S. LLL-1-535.

C. Asphalt: ASTM D312, Type IV.

D. Asphalt Primer: ASTM 41.

E. Base Flashing: Reinforced fiberglass (FE-1)

F. Roof Insulation: See Section 07220.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine subsurfaces to receive Work and report detrimental conditions in writing to Architect. Commencement of Work will be construed as acceptance of subsurfaces.

B. Roof Deck: Roof deck shall be smooth, dry, clean and free of sharp projections an depressions. Properly graded surfaces to outlets. Roof accessories shall be available before Roofing Contractor begins work.

C. Coordination: Coordinate with other work which affects, connects with, or will be concealed by this Work.

3.02 PREPARATION

A. Make subsurfaces free from material projections, dust, loose and foreign materials presenting a smooth plane, ready for installation. Seal joints and fill knot holes of wood deck. Surface must be dry before commencement of roofing application.

B. Protect roofing materials and take precautions to prevent damage. Repair torn or punctured materials before roofing over. Use runways over materials in place.

3.03 INSTALLATION - GENERAL

A. Asphalt: Asphalt temperature point of application shall be within 25 degrees F. of the EVT, applied at a nominal rate of 23 lbs. per square. Do not heat to a temperature higher than FBT. Equipment used for heating asphalt shall be equipped with accurate and clearly visible thermometers.

B. Sheet Metal Work: Prime metal flashing to be in contact with roofing with asphalt primer, allowed to dry before roofing materials are applied.

C. Outlets: Set drain outlets below roof deck surface to permit free flow of water and to prevent forming water dams at rims. Seal roofing around drains and fill metal base of ring-type drains with flashing compound. After roofing is applied, install ring and tighten while bitumen is soft.

D. Metal drip edges, flashings, jacks, pipe and conduit flashing and other flanged accessories as indicated on Drawings: Set in full troweling of plastic asphalt cement and nail flanges at 3 inches o.c. Provide 2-ply flashing of flanges consisting of: first layer 9 inch wide base felt set in full troweling of cement followed by second layer 12 inch wide set in full troweling of cement. Flange to be set over cap sheet, except flange of metal edging shall be below cap sheet. Form a cant of plastic cement around base and seal top at jacks, etc.

E. Cylindrical Penetrations: Seal with metal cap of similar material with clamping ring. Cap shall act as counterflashing over base flashing over BUR over 2x treated wood curbing and 4 inch fiber cant, as described elsewhere.

F. Non-Cylindrical Penetrations: Provide bitumen traps with vertical flanges 8 inches high and horizontal flange minimum 6 inches wide. "Stripe in" over cap sheet per D above. Fill traps with flashing cement providing a surface tapered away from the projection to the top of trap and provide positive water runoff. Install a sheet metal "umbrella" around the projection, wider than the trap, and sealed sloped to shed water around the projection, sloped to shed water beyond the entire trap surface. This method is superseded if another method is detailed on the Drawings.

G. Cant Strip: In angles of roof deck and at vertical walls or curbs, the Roofing Contractor shall furnish and install a 4 inch minimum cant strip. Prime the walls with asphalt primer and when dry, embed the strips in solid mopped asphalt. The cant strip shall fit flush at ends and to wall surface. Where scuppers occur, apply cant strip 2 inches back from flange and bevel cant 8 inches from end.

H. Parapet Walls: From roof deck to a line 16 inches maximum above roof deck, install one layer of 1/2 inch treated plywood mechanically fastened to wall. Lay reglet in masonry course immediately above plywood vertical nailer. Coat the inside and top of masonry and concrete walls evenly with Asphalt Emulsion applied with spray or soft-fibered brush, using 3 gallons per 100 sq. ft.

I. Valleys: Reinforce valleys with a 36 inch wide extra layer of base sheet and extend 12 inches up incline. Apply in direction of slope of valley, lap 4 inches on ends. Spot mop to deck. Valleys formed by crickets are included.

3.04 INSTALLATION - MEMBRANE

A. Installation shall follow manufacturers printed instructions, a copy of which shall be present at the job site.

3.05 CLEANING

A. During the course of the Work and on completion of the Work, remove excess materials, equipment and debris and dispose of away from premises. Leave Work in clean condition in accordance with Section 01500.

B. Clean bitumen spills or stains. Repair damage to existing structure or grounds to Owner's satisfaction.

END OF SECTION

SECTION 075400 – THERMOPLASTIC POLYOLEFIN SINGLE-PLY ROOFING MEMBRANE (TPO)

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes
1. Thermoplastic Polyolefin Single-Ply Roofing Membrane
2. Thermoplastic Polyolefin Flashings
3. Thermoplastic Polyolefin Accessories
4. Roof Insulation/Underlayment

B. Related Sections
1. Section 061000 - Rough Carpentry
2. Section 076200 - Sheet Metal Flashing and Trim
3. Section

1.02 REFERENCES

A. American Society for Testing and Materials (ASTM) - *Annual Book of ASTM Standards*
1. ASTM D-751 – Standard Test Methods for Coated Fabrics
2. ASTM D-2137 - Standard Test Methods for Rubber Property—Brittleness Point of Flexible Polymers and Coated Fabrics
3. ASTM E-96 - Standard Test Methods for Water Vapor Transmission of Materials
4. ASTM D1204 - Standard Test Method for Linear Dimensional Changes of Nonrigid Thermoplastic Sheeting or Film at Elevated Temperature
5. ASTM D-471 - Standard Test Method for Rubber Property—Effect of Liquids
6. ASTM D-1149 - Standard Test Methods for Rubber Deterioration—Cracking in an Ozone Controlled Environment
7. ASTM C-1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer
8. ASTM C-1371 - Standard Test Method for Determination of Emittance of Materials Near Room Temperature Using Portable Emissometers
9. ASTM E 903 – Standard Test Method for Solar Absorptance, Reflectance, and Transmission of Materials Using Integrating Spheres

B. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA) - *Architectural Sheet Metal Manual*

C. National Roofing Contractors Association (NRCA)

D. American Society of Civil Engineers (ASCE)

E. Underwriters Laboratories (UL) - *Roofing Systems and Materials Guide* (TGFU R1306)

F. ENERGY STAR

G. Cool Roof Rating Council (CRRC)

1.03 DEFINITIONS

A. Roofing Terminology: Refer to ASTM D1079 and the glossary of the National Roofing Contractors Association (NRCA) *Roofing and Waterproofing Manual* for definitions of roofing terms related to this section.

1.04 SUBMITTALS

A. Product Data: Provide product data sheets for each type of product indicated in this section.

B. Shop Drawings: Provide manufacturers standard details and approved shop drawings for the roof system specified.

C. Samples: Provide samples of insulations, fasteners, membrane materials and accessories for verification of quality.

D. Certificates: Installer shall provide written documentation from the manufacturer of their authorization to install the roof system, and eligibility to obtain the warranty specified in this section.

1.05 QUALITY ASSURANCE

A. Manufacturer's Qualifications: Manufacturer shall provide a roofing system that meets or exceeds all criteria listed in this section.

1. Installer's Qualifications: Installer shall be classified as an *Authorized* contractor as defined and certified by the manufacturer.

B. Source Limitations: All components listed in this section shall be provided by a single manufacturer or approved by the primary roofing manufacturer.

C. Final Inspection: Manufacturer's representative shall provide a comprehensive final inspection after completion of the roof system. All application errors must be addressed and final punch list completed.

1.06 PRE-INSTALLATION CONFERENCE

A. Prior to scheduled commencement of the roofing installation and associated work, conduct a meeting at the project site with the installer, architect, owner, manufacturer's representative and any other persons directly involved with the performance of the work. The installer shall record conference discussions to include decisions and agreements reached (or disagreements), and furnish copies of recorded discussions to each attending party. The main purpose of this meeting is to review foreseeable methods and procedures related to roofing work.

1.07 PERFORMANCE REQUIREMENTS

A. Provide an installed roofing membrane and base flashing system that does not permit the passage of water, and will withstand the design pressures calculated in accordance with the most current revision of ASCE 7.

B. Manufacturer shall provide all primary roofing materials that are physically and chemically compatible when installed in accordance with manufacturers current application requirements.

1.08 REGULATORY REQUIREMENTS

A. All work shall be performed in a safe, professional manner, conforming to all federal, state and local codes.

B. Exterior Fire Test Exposure: Provide a roofing system achieving a UL Class A rating for roof slopes indicated.

C. Windstorm Classification: Provide a roofing system which will achieve a Factory Mutual 1-90 wind uplift rating, as listed in the current FM Approval Guide.

1.09 DELIVERY, STORAGE AND HANDLING

A. Deliver all roofing materials to the site in original containers, with factory seals intact.

B. Store all pail goods in their original undamaged containers in a clean, dry location within their specified temperature range. Reference data sheets for product storage requirements.

C. Do not expose materials to moisture in any form before, during or after delivery to the site. Reject delivery of materials that show evidence of contact with moisture.

D. Use “breathable” type covers such as canvas tarpaulins to allow venting and protection from weather and moisture. Cover and protect materials at the end of each work day. Do not remove any protective tarpaulins until immediately before the material will be installed.

1.10 PROJECT CONDITIONS

A. Weather
1. Proceed with roofing only when existing and forecasted weather conditions permit.
2. Ambient temperatures must be above 45°F (7.2°C) when applying hot asphalt or water based adhesives.

1.11 WARRANTY/GUARANTEE: Provide manufacturers standard Guarantee

1. Single source coverage and no monetary limitation where the manufacturer agrees to repair or replace components in the roofing system, which cause a leak due to a failure in materials or workmanship.
a) Duration Fifteen (15), from the date of completion.

PART 2 PRODUCTS

2.01 BASIS OF DESIGN MANUFACTURER

A. GAF - 1 Campus Drive, Pasippany, NJ 07054

B. Other acceptable manufacturers include, but are not necessarily limited to, Carlisle, JM, Firestone.

2.02 INSULATION

A. Rigid polyisocyanurate board, with a strong white or black fibrous glass facer conforming to or exceeding the requirements of ASTM C 1289 / FS HH-I-1972. EnergyGuard™ Polyiso, with the following characteristics:
1. Board Thickness: 5” at metal deck areas to provide R30 insulation value

2.03 UNDERLAYMENT: ½" minimum thickness fiberglass mat gypsum based sheathing, equal DensGlass Use: At wood roof sheathing areas.

2.04 MEMBRANE MATERIALS

A. A smooth type, polyester scrim reinforced thermoplastic polyolefin membrane with a nominal 0.060 inch (60 mil) thickness, for use as a single ply roofing membrane. Meets or exceeds the minimum requirements of ASTM D-6878. UL Listed, FM Approved, Dade County Product Approval, Florida Building Code Approved. White membrane is Energy Star Listed, CRRC Listed. Each full roll contains approximately 1000 sq.ft. of roofing material, 10' X 100', weighing 322 lbs. Each half sheet roll contains approximately 500 sq.ft. of roofing material, 5' X 100', weighing 162 lbs.

Basis of Design: EverGuard® TPO 60 mil thermoplastic single-ply roofing membrane by GAF, or equal by Johns Manville, Carlisle, or another manufacturer.

2.05 FLASHING MATERIALS

A. A smooth type, polyester scrim reinforced thermoplastic polyolefin membrane with a nominal 0.060 inch (60 mil) thickness, for use as a single ply roofing membrane.

2.06 ADHESIVES, SEALANTS and PRIMERS

A. Solvent-based Bonding Adhesive: Solvent based rubberized adhesive for use with EverGuard® TPO membranes, EverGuard® 1121 Bonding Adhesive, by GAF®.

B. Low VOC solvent-based Bonding Adhesive: Solvent based rubberized adhesive for use with EverGuard® TPO membranes, EverGuard® Low VOC Bonding Adhesive, by GAF®.

C. Two-part VOC free low rise polyurethane foam adhesive for use with fleece-back membranes, LRF Adhesive O or M by GAF®.

D. One-part moisture cure, self-leveling sealant designed for use in pitch pans EverGuard® One-Part Pourable Sealer by GAF®.

E. Water-based Bonding Adhesive: Water based rubberized adhesive for use with EverGuard® TPO membranes, EverGuard® WB181 Bonding Adhesive, by GAF®.

F. Solvent based liquid, required to protect field cut edges of EverGuard® TPO membranes. Applied directly from a squeeze bottle, EverGuard® TPO Cut Edge Sealant, by GAF®.

G. Solvent based primer for preparing surfaces to receive butyl based adhesive tapes, EverGuard® TPO Primer, by GAF®.

H. Low VOC solvent based primer for preparing surfaces to receive butyl based adhesive tapes, EverGuard® TPO Low VOC Primer, by GAF®.

I. Solvent based seam cleaner used to clean exposed or contaminated seam prior to heat welding, EverGuard® TPO Seam Cleaner, by GAF®.

J. Low VOC solvent based cleaner used to clean exposed or contaminated seam prior to heat-welding or priming, EverGuard® CleanWeld™Conditioner, by GAF®.

K. Solvent based, trowel grade synthetic elastomeric sealant. Durable and UV resistant suitable for use where caulk is typically used. Available in 10 oz. tubes, FlexSeal™ Caulk Grade by GAF®.

L. Commercial grade roofing sealant suitable for sealing the upper lip of exposed termination bars and penetrations and around clamping rings and comes with a 20 yr ltd warranty against leaks caused by manufacturing defects. Meets the performance criteria of ASTM D412, ASTM D2196, ASTM D1475 and ASTM D1644, FlexSeal™ Roof Sealant, by GAF®.

M. One part butyl based high viscosity sealant suitable for sealing between flashing membrane and substrate surface behind exposed termination bars and for sealing between roofing membrane and drain flange. EverGuard® Water Block, by GAF®.

N. 100% solids urethane based two-part sealant suitable for filling sealant pans at irregularly-shaped penetrations. EverGuard® Two-Part Pourable Sealant, by GAF®.

O. Insulation Adhesive: Oly-Bond 500™ distributed by GAF®.

P. Insulation Adhesive: Oly-Bond 500™ Spot Shot distributed by GAF®.

Q. Insulation Adhesive: Oly-Bond 500™ Green distributed by GAF®.

R. Insulation Adhesive: Oly-Bond 500™ Spot Shot Green distributed by GAF®.

S. Insulation Adhesive: Insta-Stik by Dow Chemical
*It is the responsibility of those involved with the design of the building to obtain indemnification for the attachment and integrity of the Insta-Stik Product. GAF® assumes no responsibility for the Insta-Stik product or its performance within the system.

2.07 BITUMEN

A. Asphalt bitumen: ASTM D 312 Type III & IV

2.08 PLATES & FASTENERS

A. Drill•Tec™ ASAP® 3P Fastener: Assembled screw and 3” locking plastic plate for use on steel deck. Alloy steel fastener with CR-10 coating with a .215” diameter thread. Factory Mutual Standard 4470 Approved, #3 Phillips truss head.

2.09 ACCESSORIES

A. FLASHING ACCESSORIES

1. A smooth type, unreinforced thermoplastic polyolefin based membrane for use as an alternative flashing/reinforcing material for penetrations and corners. Required whenever preformed vent boots cannot be used, available in White, Tan, Gray, Regal Red, Regal Blue, and Hartford Green, 0.055 inches nominal thickness and sheet size: 24in x 50ft. EverGuard® TPO Detailing Membrane, by GAF®.

2. An 8 inch wide smooth type, polyester scrim reinforced thermoplastic polyolefin membrane strip for use as a cover strip over coated metal and stripping-in coated metal flanges and general repairs: 0.045 inches nominal thickness with 100 foot length, available in White.

3. Extruded aluminum termination bar with angled lip caulk receiver and lower leg bulb stiffener. Pre-punched slotted holes at 6” on center or 8” on center. ¾” x 10’ with 0.090” cross section, Drill-Tec™ Termination Bar, by GAF®.

4. Decorative metal fascia with continuos galvanized steel spring cant to terminate membrane at perimeter, EverGuard® Snap-on Fasia by GAF®

A. WALL & CURB ACCESSORIES

1. 55 mil TPO membrane and 24 gauge coated metal prefabricated into standard and custom size thru wall scuppers. Avaialable in two sizes: 4" x 6" x 12" (l x w x d) with a 5.75" x 3.75" opening and 8" x 10" x 12" (l x w x d) with a 9.75" x 7.75" opening, EverGuard® TPO Scupper, by GAF®

2. 0.060" thick molded TPO membrane outside corners of base and curb flashing. Hot-air welds directly to EverGuard® TPO membrane. Size 4" x 4" with 6" flange, EverGuard® TPO Universal Corners by GAF®.

3. 8" diameter, nominal .050" vacuum formed unreinforced TPO membrane for use in flashing outside corners of base and curb flashings, EverGuard® TPO Fluted Corner, by GAF®.

B. PENETRATION ACCESSORIES

1. 0.075" thick molded TPO membrane sized to accommodate most common pipe and conduits, (1" (25.4 mm) to 6" diameter pipes), including square tube. Hot-air welded directly to EverGuard® TPO membrane, supplied with stainless steel clamping rings, EverGuard® TPO Preformed Vent Boots by GAF®.

C. FIELD OF ROOF ACCESSORIES

1. Pre-manufactured expansion joint covers used to bridge expansion joint openings in a roof structure. Fabricated to accommodate all roof to wall and roof to roof applications, made of .060" reinforced TPO membrane, available in 5 standard sizes for expansion joint openings up to 8" wide. EverGuard® TPO Expansion Joint Covers, by GAF®

2. .055" thick smooth type, unreinforced thermoplastic polyolefin membrane designed for use as a conforming membrane seal over T-joints in 60 and 80 mil membrane applications. EverGuard® T-Joint Patches, by GAF®.

3. 1/8" thick extruded and embossed TPO roll 30" x 50', heat welds directly to roofing membrane. Unique herringbone traction surface. Gray in color, EverGuard® TPO Walkway Rolls, GAF®.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verify that the surfaces and site conditions are ready to receive work.

B. Verify that the deck is supported and secured.

C. Verify that the deck is clean and smooth, free of depressions, waves, or projections, and properly sloped to drains, valleys, eaves, scuppers or gutters.

D. Verify that the deck surfaces are dry and free of ice or snow.

E. Verify that all roof openings or penetrations through the roof are solidly set, and that all flashings are tapered.

3.02 SUBSTRATE PREPARATION

A. Steel Deck
   1. Metal decks must be a minimum uncoated thickness of 22 gauge and shall have a G-90 galvanized finish on all panels. FM requirements may supersede those set forth in this section. Consult the current FM Guide for more information.

B. Plywood Deck
   1. The deck must be installed over joists that are spaced 24" o.c. or less.
   2. The deck must be installed so that all four sides of each panel bear on and are secured to joist and cross blocking. "H" clips are not acceptable.
   3. Panels must be installed with a 1/8" to 1/4" gap between panels and must match vertically at joints to within 1/8" (3mm).
   4. Decking should be kept dry and roofed promptly after installation.

3.02 INSTALLATION - GENERAL

A. Install TPO roofing system according to all current application requirements in addition to those listed in this section.

B. Basis of Design: GAF® EverGuard® TPO Specification #T-MA-N-I-60 at metal decks, or #T-MA-N-N-60 at wood decks.

C. Start the application of membrane plies at the low point of the roof or at the drains, so that the flow of water is over or parallel to, but never against the laps.

2.10 INSULATION OR UNDERLAYMENT

A. GENERAL
   1. Do not apply roof insulation or roofing until all other work trades have completed jobs that require them to traverse the deck on foot or with equipment. Before the application of the insulation, any damage or deterioration to the vapor retarder must be repaired.
   2. Do not install wet, damaged or warped insulation boards.
   3. Install insulation boards with staggered board joints in one direction (unless taping joint).
   4. Install insulation boards snug. Gaps between board joints must not exceed ¼". All gaps in excess of ¼" must be filled with like insulation material.
   5. Wood nailers must be 3-1/2" minimum width or 1" wider than metal flange. They shall be of equal thickness as the insulation, and be treated for rot resistance. All nailers must be securely fastened to the deck.
   6. Do not kick insulation boards into place.
   7. Miter and fill the edges of the insulation boards at ridges, valleys and other changes in plane to prevent open joints or irregular surfaces. Avoid breaking or crushing of the insulation at the corners.
   8. Insulation should not be installed over new lightweight insulating concrete.
   9. Roof tape, if required over insulation joints, must be laid evenly, smoothly and embedded in a uniform coating of hot steep asphalt with 4" (102 mm) end laps. Care must be taken to assure smooth application of tape, and full embedment of the tape in the asphalt.
   10. Do not install any more insulation than will be completely waterproofed each day.

B. INSULATION and UNDERLAYMENT – BASE LAYER APPLICATION
   1. The insulation or underlayment must be securely attached to the roof deck. A minimum FMRC 1-60 attachment is recommended. Refer to FMRC Approval Guide for FM fastening patterns. Factory Mutual requires fastener density increased in corner areas for FM 1-60 as well as perimeter and corner area fastener density increases for FM 1-90 or greater. Refer to FM Loss Prevention Data Sheets 1-7, 1-28, and 1-49.
   2. Use only fasteners with a minimum 3 inch stress plate when mechanically attaching insulation or underlayment. Do not attach insulation with nails.

3.03 MEMBRANE APPLICATION

A. MECHANICALLY ATTACHED

1. Place membrane so that wrinkles and buckles are not formed. Any wrinkles or buckles must be removed from the sheet prior to permanent attachment. Roof membrane shall be mechanically fastened immediately after it is rolled out, followed by welding to adjacent sheets.
2. Overlap roof membrane a minimum of 6” for side laps and 3” for end laps.
3. Install membrane so that the side laps run across the roof slope lapped towards drainage points.
4. All exposed sheet corners shall be rounded a minimum of 1”.
5. Use full width rolls in the field of roof and half width rolls in the perimeter and corner region of the roof and mechanically fastened in the side lap area to the roof deck.
6. Membrane laps shall be heat-welded together. All welds shall be continuous, without voids or partial welds. Welds shall be free of burns and scorch marks.
7. Weld shall be a minimum of 1-1/2” in width for automatic machine welding and a minimum 2” in width for hand welding.
8. All cut edges of reinforced membrane must be sealed with EverGuard® TPO Cut Edge Sealant.
9. The membrane shall be mechanically fastened in the side lap area to the roof deck with appropriate Drill-Tec™ fasteners and plates as required by roof system specification and/or Factory Mutual classification requirements.
10. The metal plates must be placed within ¼” to ½” of the membrane edge. Plates shall not be placed less than ¼” from the membrane edge.
11. In the corner regions, additional fasteners shall be installed through the perimeter membrane to form a grid pattern, with an 8” wide EverGuard® TPO reinforced membrane flashing-strip welded over the additional fasteners. Corners include both outside and inside corners that measure 75 - 105 angle degrees.
12. Membrane attachment to the roof deck is required at locations of deck angle changes in excess of five (5) angle degrees (1” in 12”).
13. Supplemental membrane attachment is required at the base of all walls and curbs, and where the angle of the substrate changes by more than ten (10) degrees (1” in 12”). Roofing membrane shall be secured to the structural deck with screws and plates of the same type and spacing used for in-lap attachment. The screws and plates must be installed no less than ½” (13 mm) from the membrane edge. Alternatively, the roofing membrane may be turned up the vertical plane a minimum of 3” (76 mm) and secured with screws and termination bar Fastener spacing is the same as is used for in-lap attachment. The termination bar must be installed within 1-1/2” to 2” of the plane of the roof membrane, with a minimum of 1” (25.4 mm) of membrane extending above the termination bar.
14. Supplemental membrane attachment to the structural deck is required at all penetrations. Roofing membrane shall be secured to the deck with appropriate Drill-Tec™ screws and plates.
15. Fasteners must be installed to achieve the proper embedment depth. Install fasteners without lean or tilt.
16. Install fasteners so that the plate or termination bar is drawn down tightly to the membrane surface. Properly installed fasteners will not allow the plate or termination bar to move (underdriving), but will not cause wrinkling of the membrane (overdriving).

3.04 FLASHINGS

A. GENERAL

1. All penetrations must be at least 24” (610 mm) from curbs, walls, and edges to provide adequate space for proper flashing.
2. Flash all perimeter, curb, and penetration conditions with coated metal, membrane flashing, and flashing accessories as appropriate to the site condition.
3. All coated metal and membrane flashing corners shall be reinforced with preformed corners or non-reinforced membrane.
4. Heat-weld all flashing membranes, accessories, and coated metal. A minimum 2” (52 mm) wide hand weld or minimum 1-1/2" (39 mm) automatic machine weld is required

5. All cut edges of reinforced membrane must be sealed with EverGuard® TPO Cut Edge Sealant.
6. Consult the EverGuard® *Application and Specifications Manual* or GAF® Contractor Services for more information on specific construction details, or those not addressed in this section.

B. COATED METAL FLASHINGS
1. Coated metal flashings shall be formed in accordance with current EverGuard® construction details and SMACNA guidelines.
2. Coated metal sections used for roof edging, base flashing and coping shall be butted together with a ¼" (7 mm) gap to allow for expansion and contraction. Heat-weld a 6" (152 mm) wide reinforced membrane flashing strip to both sides of the joint, with approximately 1" (25.4 mm) on either side of the joint left un-welded to allow for expansion and contraction. 2" (52 mm)wide aluminum tape can be installed over the joint as a bond-breaker, to prevent welding in this area.
3. Coated metal used for sealant pans, scupper inserts, corners of roof edging, base flashing and coping shall be overlapped or provided with separate metal pieces to create a continuous flange condition, and pop-riveted securely. Heat-weld a 6" (152 mm) wide reinforced membrane flashing strip over all seams that will not be sealed during subsequent flashing installation.
4. Provide a ½" (13 mm) hem for all exposed metal edges to provide corrosion protection and edge reinforcement for improved durability.
5. Provide a ½" (13 mm) hem for all metal flange edges whenever possible to prevent wearing of the roofing and flashing membranes at the flange edge.
6. Coated metal flashings shall be nailed to treated wood nailers or otherwise mechanically attached to the roof deck, wall or curb substrates, in accordance with construction detail requirements.

C. REINFORCED MEMBRANE FLASHINGS
1. The thickness of the flashing membrane shall be the same as the thickness of the roofing membrane.
2. Membrane flashing may either be installed loose or fully adhered to the substrate surface in accordance with "Construction Detail Requirements".
3. Where flashings are to be fully adhered, apply bonding adhesive at a rate resulting in 60 square feet/gallon of finished roofing material for solvent-based bonding adhesives, and at a rate of 125 square feet/gallon of finished roofing material for water-borne bonding adhesive. Apply bonding adhesive to both the underside of the membrane and the substrate surface at 120 square feet per gallon (Solvent Based) and 250 square feet per gallon (Water Based). A greater quantity of bonding adhesive may be required based upon the substrate surface condition. The bonding adhesive must be allowed to dry until tacky to the touch before flashing membrane application.
4. Apply the adhesive only when outside temperature is above 40°F. Recommended minimum application temperature is 50°F to allow for easier adhesive application.
5. The membrane flashing shall be carefully positioned prior to application to avoid wrinkles and buckles.

D. PARAPET AND BUILDING WALLS
1. Flash walls with EverGuard® TPO membrane adhered to the substrate with bonding adhesive, loose applied (Less than 24" (610 mm) in height) or with coated metal flashing nailed 4" (102 mm) on center to pressure-treated wood nailers.
2. Secure membrane flashing at the top edge with a termination bar. EverGuard® Water Block shall be applied between the wall surface and membrane flashing underneath all exposed termination bars. Exposed termination bars shall be mechanically fastened 8" on center; termination bars that are counter flashed shall be fastened 12" on center.
3. Roof membrane must be mechanically attached along the base of walls with screws and plates (deck securement) or screws and inverted termination bar (wall securement) at the following rate:
   a) Mechanically Attached Systems Use side lap o.c. spacing, with a 12"(305 mm) maximum
4. All coated metal wall flashings and loose applied membrane flashings must be provided with separate metal counterflashings, or metal copings.

5. Metal counterflashings may be optional with fully adhered flashings depending on guarantee requirements. Exposed termination bars must be sealed with Flexseal™ Roofing Cement or Flexseal™ Caulk Grade.

E. CURBS AND DUCTS
1. Flash curbs and ducts with EverGuard® TPO membrane adhered to the curb substrate with bonding adhesive, loose applied (Less than 24” (610 mm) in height) or with coated metal flashing nailed 4” on center to pressure-treated wood nailers.
2. Secure membrane flashing at the top edge with a termination bar. Water Block shall be applied between the curb/duct surface and membrane flashing underneath all termination bars. Exposed termination bars shall be mechanically fastened every 8” (203 mm) o.c.; termination bars that are counter flashed shall be fastened 12” (305 mm) on center.
3. Roof membrane must be mechanically attached along the base of walls with screws and plates (deck securement) or screws and inverted termination bar (wall securement) at the following rate:
a) Mechanically Attached Systems Use side lap o.c. spacing, with a 12”(305 mm) maximum
4. All coated metal curb flashings and loose applied membrane flashings must be provided with separate metal counterflashings, or metal copings.
5. Metal counterflashings may be optional with fully adhered flashings depending on guarantee requirements. Exposed termination bars must be sealed with Flexseal™ Roofing Cement.

F. ROOF DRAINS
1. Roof drains must be fitted with compression type clamping rings and strainer baskets. Original-type cast iron and aluminum drains, as well as retrofit-type cast iron, aluminum or molded plastic drains are acceptable.
2. Roof drains must be provided with a minimum 36” x 36” sump if applicable. Slope of tapered insulation within the sump shall not exceed 4” in 12”.
3. Extend the roofing membrane over the drain opening. Locate the drain and cut a hole in the roofing membrane directly over the drain opening. Provide a ½” (13 mm) of membrane flap extending past the drain flange into the drain opening. Punch holes through the roofing membrane at drain bolt locations.
4. For cast iron and aluminum drains, the roofing membrane must be set in a full bed of water block on the drain flange prior to securement with the compression clamping ring. Typical water block application is one 10.5 ounce cartridge per drain.
5. Lap seams shall not be located within the sump area. Where lap seams will be located within the sump area, a separate roof membrane drain flashing a minimum of 12” (305 mm) larger than the sump area must be installed. The roof membrane shall be mechanically attached 12” (305 mm) on center around the drain with screws and plates. The separate roof drain flashing shall be heat welded to the roof membrane beyond the screws and plates, extended over the drain flange, and secured as above.
6. Tighten the drain compression ring in place.

3.05 TRAFFIC PROTECTION

A. Install walkway pads at all roof access locations and other designated locations including roof-mounted equipment work locations and areas of repeated rooftop traffic.

B. Walkway rolls can be cut into pads and must be spaced 2" (52 mm) apart to allow for drainage between the pads.

C. Fully adhere walkway pads/rolls to the roof membrane with solvent-based bonding adhesive, applied at the rate of 1 gal. per 100 sq. ft. to both the walkway and roof membrane surfaces. Press walkway in position once adhesive is tacky to the touch.

D. Alternatively, walkway pads/rolls may be heat-welded to the roof membrane surface continuously around the perimeter of the pad/roll.

3.06 ROOF PROTECTION

A. Protect all partially and fully completed roofing work from other trades until completion.

B. Whenever possible, stage materials in such a manner that foot traffic is minimized over completed roof areas.

C. When it is not possible to stage materials away from locations where partial or complete installation has taken place, temporary walkways and platforms shall be installed in order to protect all completed roof areas from traffic and point loading during the application process.

D. Temporary tie-ins shall be installed at the end of each workday and removed prior to commencement of work the following day.

3.07 CLEAN-UP

A. All work areas are to be kept clean, clear and free of debris at all times.

B. Do not allow trash, waste, or debris to collect on the roof. These items shall be removed from the roof on a daily basis.

C. All tools and unused materials must be collected at the end of each workday and stored properly off of the finished roof surface and protected from exposure to the elements.

D. Dispose of or recycle all trash and excess material in a manner conforming to current EPA regulations and local laws.

E. Properly clean the finished roof surface after completion, and make sure the drains and gutters are not clogged.

F. Clean and restore all damaged surfaces to their original condition.

END OF SECTION

SECTION 076200

FLASHING AND SHEET METAL

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Flashings, sheet metal work and related items including, but not limited to:
1. Counterflashing at vertical surfaces.
2. Flashing at roof penetrations.
3. Edge flashing.
4. Sheet metal gutters and downspouts.
5. Metal copings.
6. Louvers
7. Sump pans.

1.02 SUBMITTALS

A. Shop Drawings: Submit Drawings indicating type of material, gage, dimensions, profiles, locations where used, fastening and anchoring methods, joints, and provisions of expansion and contraction.

1.03 QUALITY ASSURANCE

A. Standards:
1. Comply with design and installation methods of SMACNA Architectural Sheet Metal Manual.
2. Comply with The NRCA Roofing and Waterproofing Manual installation details.

1.04 DELIVERY, STORAGE AND HANDLING

A. Packing and Shipping: Deliver materials to site in Manufacturer's original unopened packaging with labels intact.

B. Storage: Adequately protect against damage while stored at the site.

C. Handling: Comply with Manufacturer's instructions.

PART 2 PRODUCTS

2.01 MATERIALS (As required and where applicable)

A. Galvanized Steel: ASTM A526, 24 gage (0.50mm) minimum, with ASTM A525 coating.

B. Solder: ASTM B32, 50/50 type.

C. Flux: FS O-F-506.

D. Sealant: As specified in Section 07900.

E. Asphalt Primer: ASTM D41.

F. Sheet Metal Fasteners: Galvanized steel with soft neoprene washers at exposed fasteners.

G. Plastic Cement: FS SS-C-153, Type I.

H. Reglets and Counterflashings: Fry Reglet Corporation, Type ST at stucco, Type MA at masonry, Type CO (galvanized steel) at concrete, or fabricated as indicated on Drawings.

I. Roofing Felt: ASTM D226, 15 pound type or 30 pound type.

J. Bituminous Coating: FS TT-C-494 or SSPC paint - 12, dry film 15 mils per coat.

K. Polyethylene: Black, 6 mil.

2.02 FABRICATION

A. Fabricate sheet metal with lines, arris, and angles sharp and true, and plane surfaces free from objectionable wave, warp or buckle. Hem exposed edges to form a 1/2 inch (12mm) wide hem on the side concealed from view.

B. Forming, anchoring, expansion and contraction details, shall conform to referenced quality standards.

C. Provide for thermal expansion of running trim, flashing, expansion joints, and other items exposed for more than 15 feet continuous length.

D. Fabricate cleats and starter strips of same material as sheet.

E. Form pieces in longest practical lengths, except form flashing and facias in 8 to 10 foot (2400mm to 3000mm) units.

F. Fabricate coping covers with standing seams.

G. Solder and seal metal joints. After soldering, remove flux. Wipe and wash solder joints clean.

H. Fabricate corners from one piece with minimum 18 inch (450mm) long legs, with mitered corners; solder for rigidity, seal with sealant.

I. Fabricate flashings to allow toe to extend 2 inches (50mm) over roofing. Return and brake edges.

J. Where prefabricated counterflashing and reglet system is used, form upper edge of counterflashing with an approved snap lock flange to engage reglet receiver and to provide a spring action at bottom edge against built-up flashing.

K. Form sheet metal pans 6 inch (150mm) nominal square size, with 3 inch (75mm) upstand, and 4 inch (100mm) flanges. Fill pans watertight with plastic cement.

2.03 FINISH

A. Shop prepare and prime exposed ferrous metal surfaces.

B. Backpaint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 1.5 mil (0.38mm).

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine subsurfaces to receive Work and report detrimental conditions in writing to Architect. Commencement of Work will be construed as acceptance of subsurfaces.

1. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
2. Verify membrane termination and base flashings are in place, sealed, and secure.

B. Coordination: Coordinate with other Work which affects, connects with, or will be concealed by this Work.

3.02 INSTALLATION

A. Installation shall conform to NRCA and SMACNA manuals.

B. Expansion Seams: Maintain a watertight installation at expansion seams. Locate expansion seams as shown or if not shown, at the following maximum spacing for each general flashing use:

1. Flashing, expansion joints, gravel stops, and trim: At 10 foot (3000mm) intervals, 24 inches (600mm) on each side of corners and intersections.
2. Sealant-type expansion joints: Where sealant-filled expansion joints are used, embed the hooked flanges of the joint members not less than 1 inch (25mm) into the sealant. Form joints to completely conceal the sealant. When ambient temperature is moderate at the time of installation (40 to 70 degrees F.) (4 to 21 degrees C.), set joint members for 50 percent movement either way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant type joints at temperatures below 40 degrees F. (4 degrees C.) Installation of sealant is specified in Section 07900.

C. Where dissimilar materials abut, provide proper separation or protection to minimize the possibility of galvanic action.

D. Soldering:

1. Except where other methods of joining are indicated or specified, solder joints and connections of Sheet Metal Work.
2. Remove grease and dirt from metal surfaces to be joined.
3. Remove flux residue by scrubbing, neutralizing with ammonia or a 5 to 10 percent solution of washing soda, followed by a clear water rinse.
4. Assemble parts and solder using regular non-corrosive resin flux. Heat metal thoroughly to completely sweat solder through full contact area.

E. Reglets: Install reglets in masonry, concrete or stucco to receive flashings.

F. Counterflashing:
1. Provide metal counterflashing at top edges of built-up base flashings and at other locations indicated.
2. Lap end joints a minimum of 3 inches (75mm). Do not solder or weld joints. Make flashing continuous at angles. Counterflashing shall overlap base flashing a minimum of 4 inches (100mm), unless otherwise indicated.
3. Where counterflashing terminates in reglets, fasten flashing with lead wedges every 12 inches (300mm). Fill reglets continuously with synthetic rubber type sealant.

G. Facias:
1. Provide facias at exposed edges of built-up roofs. Fabricate from 24 gage galvanized metal. (All steel noted to be “rusty” shall be naturally weathered. No chemicals shall be used to “rust” the steel.)
2. Form expansion joints between units with 6 inch (150mm) wide back-up plate and cover plates formed to exact profile of gravel stop. Fill space between units and plates with sealant.
3. Extend flanges of gravel stop out on top of built-up roofing not less than 4 inches. Set in full bed of plastic cement. Spread full bed of plastic cement between sheets of lap. Nail 1 inch (25mm) from back edge at 6 inches (150mm) o.c. into wood nailer.

H. Copings:
1. Cover top of parapet walls where indicated with 24 gage (0.50mm) galvanized metal coping formed to design shown. Before applying metal, cover top of wall or wood blocking with polyethylene. (All steel noted to be “rusty” shall be naturally weathered. No chemicals shall be used to “rust” the steel.)
2. Extend front edge of coping covering down over the lock into a previously placed continuous edge strip. Secure edge strips with nails spaced 12 inches (300mm) apart.
3. Join rear edge of coping covering to adjacent flashings as indicated.

I. Metal Edgings:
1. Provide metal edgings at exposed edges of built-up roofs. Fabricate from 24 gage galvanized iron, profile indicated.
2. Extend flanges of metal edgings out on top of built-up roofing or base flashing (as applicable) not less than 4 inches (100mm). Set in full bed of plastic cement. Spread full bed of plastic cement between sheets at laps. Nail flanges to wood nailer when nailers are under the membrane or flashing (as at roof edge or gravel stops). Nail as shown in the referenced quality standards.

3.03 CLEANING

A. During the course of the Work and on completion, remove and dispose of excess materials, equipment and debris away from premises. Leave Work in clean condition in accordance with Section 01500.

END OF SECTION

SECTION 076200

FLASHING AND SHEET METAL

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Flashings, sheet metal work and related items including, but not limited to:
1. Counterflashing at vertical surfaces.
2. Flashing at roof penetrations.
3. Edge flashing.
4. Sheet metal gutters and downspouts.
5. Metal copings.
6. Louvers
7. Sump pans.

1.02 SUBMITTALS

A. Shop Drawings: Submit Drawings indicating type of material, gage, dimensions, profiles, locations where used, fastening and anchoring methods, joints, and provisions of expansion and contraction.

1.03 QUALITY ASSURANCE

A. Standards:
1. Comply with design and installation methods of SMACNA Architectural Sheet Metal Manual.
2. Comply with The NRCA Roofing and Waterproofing Manual installation details.

1.04 DELIVERY, STORAGE AND HANDLING

A. Packing and Shipping: Deliver materials to site in Manufacturer's original unopened packaging with labels intact.

B. Storage: Adequately protect against damage while stored at the site.

C. Handling: Comply with Manufacturer's instructions.

PART 2 PRODUCTS

2.01 MATERIALS (As required and where applicable)

A. Galvanized Steel: ASTM A526, 24 gage (0.50mm) minimum, with ASTM A525 coating.

B. Solder: ASTM B32, 50/50 type.

C. Flux: FS O-F-506.

D. Sealant: As specified in Section 07900.

E. Asphalt Primer: ASTM D41.

F. Sheet Metal Fasteners: Galvanized steel with soft neoprene washers at exposed fasteners.

G. Plastic Cement: FS SS-C-153, Type I.

H. Reglets and Counterflashings: Fry Reglet Corporation, Type ST at stucco, Type MA at masonry, Type CO (galvanized steel) at concrete, or fabricated as indicated on Drawings.

I. Roofing Felt: ASTM D226, 15 pound type or 30 pound type.

J. Bituminous Coating: FS TT-C-494 or SSPC paint - 12, dry film 15 mils per coat.

K. Polyethylene: Black, 6 mil.

2.02 FABRICATION

A. Fabricate sheet metal with lines, arris, and angles sharp and true, and plane surfaces free from objectionable wave, warp or buckle. Hem exposed edges to form a 1/2 inch (12mm) wide hem on the side concealed from view.

B. Forming, anchoring, expansion and contraction details, shall conform to referenced quality standards.

C. Provide for thermal expansion of running trim, flashing, expansion joints, and other items exposed for more than 15 feet continuous length.

D. Fabricate cleats and starter strips of same material as sheet.

E. Form pieces in longest practical lengths, except form flashing and facias in 8 to 10 foot (2400mm to 3000mm) units.

F. Fabricate coping covers with standing seams.

G. Solder and seal metal joints. After soldering, remove flux. Wipe and wash solder joints clean.

H. Fabricate corners from one piece with minimum 18 inch (450mm) long legs, with mitered corners; solder for rigidity, seal with sealant.

I. Fabricate flashings to allow toe to extend 2 inches (50mm) over roofing. Return and brake edges.

J. Where prefabricated counterflashing and reglet system is used, form upper edge of counterflashing with an approved snap lock flange to engage reglet receiver and to provide a spring action at bottom edge against built-up flashing.

K. Form sheet metal pans 6 inch (150mm) nominal square size, with 3 inch (75mm) upstand, and 4 inch (100mm) flanges. Fill pans watertight with plastic cement.

2.03 FINISH

A. Shop prepare and prime exposed ferrous metal surfaces.

B. Backpaint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 1.5 mil (0.38mm).

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine subsurfaces to receive Work and report detrimental conditions in writing to Architect. Commencement of Work will be construed as acceptance of subsurfaces.

1. Verify roof openings, curbs, pipes, sleeves, ducts, or vents through roof are solidly set, cant strips and reglets in place, and nailing strips located.
2. Verify membrane termination and base flashings are in place, sealed, and secure.

B. Coordination: Coordinate with other Work which affects, connects with, or will be concealed by this Work.

3.02 INSTALLATION

A. Installation shall conform to NRCA and SMACNA manuals.

B. Expansion Seams: Maintain a watertight installation at expansion seams. Locate expansion seams as shown or if not shown, at the following maximum spacing for each general flashing use:

1. Flashing, expansion joints, gravel stops, and trim: At 10 foot (3000mm) intervals, 24 inches (600mm) on each side of corners and intersections.
2. Sealant-type expansion joints: Where sealant-filled expansion joints are used, embed the hooked flanges of the joint members not less than 1 inch (25mm) into the sealant. Form joints to completely conceal the sealant. When ambient temperature is moderate at the time of installation (40 to 70 degrees F.) (4 to 21 degrees C.), set joint members for 50 percent movement either way. Adjust setting proportionately for installation at higher ambient temperatures. Do not install sealant type joints at temperatures below 40 degrees F. (4 degrees C.) Installation of sealant is specified in Section 07900.

C. Where dissimilar materials abut, provide proper separation or protection to minimize the possibility of galvanic action.

D. Soldering:

1. Except where other methods of joining are indicated or specified, solder joints and connections of Sheet Metal Work.
2. Remove grease and dirt from metal surfaces to be joined.
3. Remove flux residue by scrubbing, neutralizing with ammonia or a 5 to 10 percent solution of washing soda, followed by a clear water rinse.
4. Assemble parts and solder using regular non-corrosive resin flux. Heat metal thoroughly to completely sweat solder through full contact area.

E. Reglets: Install reglets in masonry, concrete or stucco to receive flashings.

F. Counterflashing:
1. Provide metal counterflashing at top edges of built-up base flashings and at other locations indicated.
2. Lap end joints a minimum of 3 inches (75mm). Do not solder or weld joints. Make flashing continuous at angles. Counterflashing shall overlap base flashing a minimum of 4 inches (100mm), unless otherwise indicated.
3. Where counterflashing terminates in reglets, fasten flashing with lead wedges every 12 inches (300mm). Fill reglets continuously with synthetic rubber type sealant.

G. Facias:
1. Provide facias at exposed edges of built-up roofs. Fabricate from 24 gage galvanized metal. (All steel noted to be “rusty” shall be naturally weathered. No chemicals shall be used to “rust” the steel.)
2. Form expansion joints between units with 6 inch (150mm) wide back-up plate and cover plates formed to exact profile of gravel stop. Fill space between units and plates with sealant.
3. Extend flanges of gravel stop out on top of built-up roofing not less than 4 inches. Set in full bed of plastic cement. Spread full bed of plastic cement between sheets of lap. Nail 1 inch (25mm) from back edge at 6 inches (150mm) o.c. into wood nailer.

H. Copings:
1. Cover top of parapet walls where indicated with 24 gage (0.50mm) galvanized metal coping formed to design shown. Before applying metal, cover top of wall or wood blocking with polyethylene. (All steel noted to be “rusty” shall be naturally weathered. No chemicals shall be used to “rust” the steel.)
2. Extend front edge of coping covering down over the lock into a previously placed continuous edge strip. Secure edge strips with nails spaced 12 inches (300mm) apart.
3. Join rear edge of coping covering to adjacent flashings as indicated.

I. Metal Edgings:
1. Provide metal edgings at exposed edges of built-up roofs. Fabricate from 24 gage galvanized iron, profile indicated.
2. Extend flanges of metal edgings out on top of built-up roofing or base flashing (as applicable) not less than 4 inches (100mm). Set in full bed of plastic cement. Spread full bed of plastic cement between sheets at laps. Nail flanges to wood nailer when nailers are under the membrane or flashing (as at roof edge or gravel stops). Nail as shown in the referenced quality standards.

3.03 CLEANING

A. During the course of the Work and on completion, remove and dispose of excess materials, equipment and debris away from premises. Leave Work in clean condition in accordance with Section 01500.

END OF SECTION

SECTION 077200

ROOF HATCHES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Roof hatch with safety accessory; guardrails as indicated.

B. Vertical wall ladders are specified in Section 055000 – Metal Fabrications.

1.3 SUBMITTALS

A. General: Submit the following according to Conditions of Contract and Division 1 Specification Sections.

B. Product data for each type of product specified. Submit manufacturer's detailed technical product data, installation instructions and recommendations, including details of construction relative to materials, dimensions of individual components, profiles, and finishes.

1.4 QUALITY ASSURANCE

A. Standards: Comply with the following:

1. SMACNA "Architectural Sheet Metal Manual" details for fabrication of units, including flanges and cap-flashing to coordinate with type of roofing indicated.

2. NRCA "Roofing and Waterproofing Manual" details for installation of units.

3. OSHA 1910.23 and 1910.27.

4. ANSI A1264.1-1995.

B. PERFORMANCE REQUIREMENTS: General Performance: Roof accessories shall withstand exposure to weather and resist thermally induced movement without failure, rattling, leaking, or fastener disengagement due to defective manufacture, fabrication, installation, or other defects in construction.

C. COORDINATION: Coordinate layout and installation of roof accessories with roofing system and interfacing and adjoining construction to provide a leakproof, weathertight, secure, and

noncorrosive installation. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

A. Commercial-Quality Galvanized Steel Sheet: ASTM A 526 with G90 coating complying with ASTM A 525.

B. Insulation: Manufacturer's standard rigid or semirigid glass-fiber board of thickness indicated.

C. Wood Nailers: Softwood lumber, pressure treated with water-borne preservatives for above-ground use, complying with AWPA C2; not less than 1-1/2 inch thick.

D. Fasteners: Same metal as metals being fastened, or nonmagnetic stainless steel or other noncorrosive metal as recommended by manufacturer. Match finish of exposed fasteners with finish of material being fastened.

1. Where removal of exterior exposed fasteners affords access to building, provide nonremovable fastener heads.

E. Gaskets: Manufacturer's standard tubular or fingered design of neoprene or polyvinyl chloride, or block design of sponge neoprene.

F. Bituminous Coating: SSPC-Paint 12, solvent-type bituminous mastic, nominally free of sulfur and containing no asbestos fibers, compounded for 15-mil dry film thickness per coating.

G. Mastic Sealant: Polyisobutylene; nonhardening, nonskinning, nondrying, nonmigrating sealant.

H. Elastomeric Sealant: Generic type recommended by unit manufacturer that is compatible with joint surfaces; ASTM C 920, Type S, Grade NS, Class 25, and Uses NT, G, and, A.

I. Roofing Cement: ASTM D 4586, nonasbestos, fibrated asphalt cement designed for trowel application or other adhesive compatible with roofing system.

2.2 FINISHES

A. General: Comply with NAAMM "Metal Finishes Manual" for recommendations on applying and designating finishes.

B. Baked Enamel Primer Finish: AA-C12C42R1x (Chemical Finish: cleaned with inhibited chemicals; Chemical Finish: chemical conversion coating, acid chromate-fluoride-phosphate pretreatment; Organic Coating: as specified below). Apply baked enamel complying with paint manufacturer's specifications for cleaning, conversion coating, and painting.

2.3 ROOF HATCH

A. General: Fabricate units to withstand 40-lbf per sq. ft. external loading and 20-lbf per sq. ft. internal loading pressure. Frame with 9-inch-high, integral-curb, double-wall construction with 1-1/2 inch insulation, cant strips and cap flashing (roofing counterflashing), with welded or sealed mechanical corner joints. Provide double-wall cover (lid) construction with 1 inch insulation core. Provide gasketing and equip corrosion-resistant or hot-dip galvanized hardware including pintle hinges, hold-open devices, interior padlock hasps, and both interior and exterior latch handles.

B. Type: Single-leaf personnel access.

1. For Vertical Wall Ladder Access: 30” x 36”

C. Material: Zinc-coated steel sheets, 14 ga., primed.

D. Safety Accessory: Provide clamp-on safety device for each meeting ANSI A14.3. Bilco Ladder-Up or Dur-Red Safety Post, black powder coat.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Comply with manufacturer's instructions and recommendations. Coordinate with installation of roof deck to ensure that hatch performs properly. Anchor units securely to supporting structural substrates, adequate to withstand lateral and thermal stresses, as well as inward and outward loading pressures.

1. Install roof accessory items according to construction details of NRCA "Roofing and Waterproofing Manual" and with details shown on drawings.

B. Isolation: Where metal surfaces of units are to be installed in contact with incompatible metal or corrosive substrates, including wood, apply bituminous coating on concealed metal surfaces, or provide other permanent separation.

C. Flange Seals: Set flanges of accessory units in a thick bed of roofing cement to form a consistent seal.

D. Cap Flashing: Where cap flashing is required as component of accessory, install to provide adequate waterproof overlap with roofing or roof flashing (as counterflashing). Seal with thick bead of mastic sealant, except where overlap is indicated to be left open for ventilation.

E. Install ladder safety accessory at each roof hatch, and safety rails as indicated.

F. Test operate units. Clean and lubricate joints and hardware. Adjust for proper operation.

3.2 CLEANING AND PROTECTION

A. Clean exposed metal surfaces according to manufacturer's instructions. Touch up damaged metal coatings.

END OF SECTION 077200

SECTION 078400

FIRESTOPPING

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Firestopping systems for penetrations through fire-resistance-rated assemblies, including both empty openings and openings containing penetrating items:
2.
   a. Penetrations through fire-resistance rated assemblies, both vertical and horizontal.
   b. Penetration through smoke barriers.
   c.
3. Fire-resistive joint systems for:
4.
   a. Floor to wall joints.
   b. Wall to deck joints.
   c. Holes through walls.

5. Identification labels for firestopping installations.

B. Related Sections:
1. Divisions 20, 21, 22, and 23 Sections specifying duct and piping penetrations.
2. Divisions 26, 27, 28 Sections specifying cable tray, cable and conduit penetrations.

1.2 PERFORMANCE REQUIREMENTS

A. General: For the following constructions, provide firestopping systems in accordance with International Building Code and fire-resistive joint systems to resist spread of fire according to requirements indicated, resist passage of smoke and other gases, and maintain original fire-resistance rating of assembly penetrated.

B. F-Rated Systems: Provide through-penetration firestopping systems with F-ratings indicated, as determined per ASTM E 814, but not less than that equaling or exceeding fire-resistance rating of constructions penetrated.

C. T-Rated Systems: For the following conditions, provide through-penetration firestopping systems with T-ratings indicated, as well as F-ratings, as determined per ASTM E 814, where systems protect penetrating items exposed to potential contact with adjacent materials in occupied floor areas:
1. Penetrations located in construction containing fire-rated openings.
2. Penetrating items larger than 4-inch- diameter nominal pipe or 16 sq. in. in overall cross-sectional area.

D. For firestopping systems exposed to view, traffic, moisture, and physical damage, provide products that after curing do not deteriorate when exposed to these conditions both during and after construction.
1. For piping penetrations for plumbing and wet-pipe sprinkler systems, provide moisture-resistant firestopping systems.

2. For penetrations involving insulated piping, provide firestopping systems not requiring removal of insulation.

E. For firestopping systems exposed to view, provide products with flame-spread ratings of less than 25 and smoke-developed ratings of less than 450, as determined per ASTM E 84.
   1. Load-bearing capabilities as determined by evaluation during the time test.

F. Fire Resistance of Perimeter Fire-Containment Systems: Integrity and insulation ratings indicated as determined by UBC Standard 26-9 and UL 2079.

1.3 SUBMITTALS

A. Product Data: For each type of firestopping system product indicated.

B. Shop Drawings: For each firestopping system and fire-resistive joint system, show each kind of construction condition penetrated, relationships to adjoining construction, and kind of penetrating item. Include firestopping design designation of testing and inspecting agency acceptable to authorities having jurisdiction that evidences compliance with requirements for each condition indicated.
   1. Submit documentation, including illustrations, from qualified testing agency that is applicable to each firestopping system configuration for construction and penetrating items.
   2. Where Project conditions require modification of qualified testing agency's illustration to suit a particular firestopping condition, submit illustration, with modifications marked, approved by firestopping system manufacturer's fire-protection engineer.

C. Qualification Data: For firms and persons specified, to demonstrate their capabilities and experience. Include lists of completed projects with project names and addresses, names and addresses of architects and owners, and contact information.

D. Product Certificates: Signed by manufacturers of firestopping system products certifying that products furnished comply with Specifications.

E. Product Test Reports: From qualified testing agency indicating firestopping system complies with Specifications, based on comprehensive testing of current products.

F. Compatibility and Adhesion Test Reports: From fire-resistive joint system manufacturer indicating:

   1. Materials forming joint substrates have been tested for compatibility and adhesion with fill materials.
   2. Interpretation of test results and written recommendations for primers and substrate preparation needed for adhesion.

G. Evaluation Reports: Evidence of fire-resistive joint system compliance with ICBO ES AC30, from the ICBO Evaluation Service.

H. At time of Substantial Completion, submit photographs of typical firestopping installations labelled with locations in Project.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed firestopping systems similar in material, design, and extent to this Project and whose work has resulted in construction with record of successful in-service performance.

B. Source Limitations: Obtain firestopping systems, for each kind of penetration and construction condition indicated, from a single manufacturer.

C. Fire-Test-Response Characteristics: Provide firestopping systems that comply with the following requirements and those specified:
   1. Firestopping tests are performed by a qualified testing agency such as Underwriters Laboratories (UL).
   2. Through-penetration firestopping systems are identical to those tested per ASTM E 814.
   3. Fire-resistive joint systems are identical to those tested per ICBO ES AC30 and are qualified for types of joints and joint movement capabilities indicated in current Evaluation Report by ICBO Evaluation Service.
   4. Perimeter fire-containment systems are identical to those tested per UL 2079.
   5. Firestopping systems are identical with firestopping system designations listed by UL Fire Resistance Directory.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver firestopping system products to Project site in original, unopened containers or packages with intact and legible manufacturers' labels identifying:

   1. Product and manufacturer.
   2. Date of manufacture.
   3. Lot number.
   4. Shelf life.
   5. Qualified testing agency classification marking applicable to Project.
   6. Curing time.
   7. Mixing instructions for multicomponent materials.
   8. Identifications labels for all firestopping locations.

B. Store and handle materials for firestopping systems to prevent deterioration or damage due to moisture, temperature changes, contaminants, or other causes.

1.6 PROJECT CONDITIONS

A. Environmental Limitations: Do not install firestopping systems when ambient or substrate temperatures are outside limits permitted by firestopping system manufacturers or when substrates are wet due to rain, frost, condensation, or other causes.

B. Ventilate firestopping systems per manufacturer's written instructions by natural means or, if necessary, forced-air circulation.

1.7 COORDINATION

A. Coordinate construction of openings and penetrating items to ensure firestopping systems are installed according to Specifications.

B. Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate firestopping systems.

C. Do not cover up firestopping system installations that will become concealed behind other construction until building inspector, if required by authorities having jurisdiction, has examined each installation.

PART 2 - PRODUCTS

2.1 PRODUCTS AND MANUFACTURERS

A. Subject to compliance with Specifications, through-penetration and fire-resistive joint systems by these manufacturers may be submitted:
1. AD Fire Protection Systems (adfire.com)
2. Hilti Construction Chemicals (us.hilti.com)
3. Grace Construction Products (na.graceconstruction.com)
4. Nelson Firestop Products (nelsonfirestopping.com)
5. Specified Technologies (stifirestopping.com)
6. 3M Fire Protection Products (3m.com)
7. Tremco (tremcosealants.com)

2.2 FIRESTOPPING, GENERAL

A. Compatibility: Provide firestopping systems compatible with one another, with substrates forming openings, and with items penetrating firestopping systems, under conditions of service and application, as demonstrated by firestopping system manufacturer based on testing and field experience.

B. Accessories: Provide components for each firestopping system needed to install fill materials and to comply with Performance Requirements Article. Use only components specified by firestopping system manufacturer and approved by qualified testing and inspecting agency for firestopping systems indicated. Accessories include, but are not limited to:
1. Permanent forming/damming/backing materials, including:
    a. Slag-rock-wool-fiber insulation.
    b. Sealants used in combination with other forming/damming/backing materials to prevent leakage of fill materials in liquid state.
    c. Fire-rated form board.
    d. Fillers for sealants.
2. Temporary forming materials.
3. Substrate primers.
4. Collars.
5. Steel sleeves.

2.3 FILL MATERIALS

A. General: Provide firestopping systems containing fill materials indicated by reference to types of materials described in this Article. Fill materials are those referred to in directories of referenced testing and inspecting agencies as fill, void, or cavity materials.

B. Cast in Place Firestopping Devices: Factory-assembled devices for use in cast-in-place concrete floors and consisting of an outer metallic sleeve lined with intumescent strip, a radial extended flange attached to one end of sleeve for fastening to concrete formwork, and neoprene gasket.

C. Latex Sealants: Single-component latex formulations that after cure do not re-emulsify during exposure to moisture.

D. Firestopping Devices: Factory-assembled collars formed from galvanized steel and lined with intumescent material sized to fit specific diameter of penetrant.

E. Intumescent Composite Sheets: Rigid panels consisting of aluminum-foil-faced elastomeric sheet bonded to galvanized steel sheet.

F. Intumescent Putties: Nonhardening dielectric, water-resistant putties containing no solvents, inorganic fibers, or silicone compounds.

G. Intumescent Wrap Strips: Single-component intumescent elastomeric sheets with aluminum foil on one side.

H. Mortars: Prepackaged, dry mixes consisting of a blend of inorganic binders, hydraulic cement, fillers, and lightweight aggregate formulated for mixing with water at Project site to form a nonshrinking, homogeneous mortar.

I. Silicone Foams: Multicomponent, silicone-based liquid elastomers that, when mixed, expand and cure in place to produce a flexible, nonshrinking foam.

J. Silicone Sealants: Moisture-curing, single-component, silicone-based, neutral-curing elastomeric sealants of grade indicated:
   1. Grade: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces and nonsag formulation for openings in vertical and other surfaces requiring a nonslumping, gunnable sealant, unless indicated firestopping system limits use to nonsag grade for both opening conditions.
   2. Grade for Horizontal Surfaces: Pourable (self-leveling) formulation for openings in floors and other horizontal surfaces.
   3. Grade for Vertical Surfaces: Nonsag formulation for openings in vertical and other surfaces.

2.4 MIXING

A. For those products requiring mixing before application, comply with firestopping system manufacturer's written instructions for accurate proportioning of materials, type of mixing equipment, selection of mixer speeds, mixing containers, mixing time, and other items or procedures needed to produce products of uniform quality with optimum performance characteristics for application indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with installer present, for compliance with requirements for opening configurations, penetrating items, substrates, and other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Surface Cleaning: Clean out openings immediately before installing firestopping systems to comply with written recommendations of firestopping system manufacturer and the following requirements:
   1. Remove from surfaces of opening substrates and from penetrating items foreign materials that could interfere with adhesion of firestopping systems.
   2. Clean opening substrates and penetrating items to produce clean, sound surfaces capable of developing optimum bond with firestopping systems. Remove loose particles remaining from cleaning operation.
   3. Remove laitance and form-release agents from concrete.

B. Priming: Prime substrates where recommended in writing by firestopping system manufacturer using that manufacturer's recommended products and methods. Confine primers to areas of bond; do not allow spillage and migration onto exposed surfaces.

C. Masking: Apply masking to prevent firestopping systems from contacting adjoining surfaces that will remain exposed on completion of Work and that would otherwise be permanently stained or damaged by such contact or by cleaning methods used to remove smears from firestopping system materials. Remove tape as soon as possible without disturbing firestopping system's seal with substrates.

3.3 FIRESTOPPING SYSTEM INSTALLATION

A. General: Install firestopping systems to comply with this Specification and manufacturer's written installation instructions and published drawings for products and applications indicated.

B. Install forming/damming/backing materials and other accessories of types required to support fill materials during their application and in position needed to produce cross-sectional shapes and depths required to achieve fire ratings indicated.

1. After installing fill materials, remove combustible forming materials and other accessories not indicated as permanent components of firestopping systems.

C. Install fill materials for firestopping systems by proven techniques to produce the following results:
   1. Fill voids and cavities formed by openings, forming materials, accessories, and penetrating items as required achieving fire-resistance ratings indicated.
   2. Apply materials so they contact and adhere to substrates formed by openings and penetrating items.
   3. For fill materials that will remain exposed after completing Work, finish to produce smooth, uniform surfaces that are flush with adjoining finishes.

3.4 IDENTIFICATION

A. Identify firestopping systems with pressure-sensitive, self-adhesive, preprinted vinyl labels. Attach labels permanently to surfaces of penetrated construction on both sides of each firestopping system installation where labels will be visible to anyone seeking to remove penetrating items or firestopping systems. Include the following information on labels:
   1. The words: "Warning-- Firestopping System--Do Not Disturb. Notify Building Management of Any Damage."
   2. Contractor's name, address, and phone number.
   3. Firestopping system designation of applicable testing agency.
   4. Date of installation.
   5. Firestopping system manufacturer's name.

3.5 CLEANING AND PROTECTION

A. Clean off excess fill materials adjacent to openings as Work progresses by methods and with cleaning materials approved in writing by firestopping system manufacturers and that do not damage materials in which openings occur.

B. Provide final protection and maintain conditions during and after installation that ensure firestopping systems are without damage or deterioration at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated firestopping systems immediately and install new materials to produce firestopping systems complying with Specifications.

3.6 PHOTOGRAPHS

A. Provide two digital photographs of typical firestopping installations including legible identification to locate installation. Include in warranty manual.

END OF SECTION 078400

SECTION 079200

JOINT SEALERS

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Preparing substrate surfaces.

B. Sealant and joint backing.

C. Expanding foam secondary sealant.

1.02 RELATED SECTIONS

A. Section 042000 – Unit Masonry.

B. Section 081113 - Hollow Metal Doors and Frames.

C. Section 084413 – Aluminum Framing, Storefront and Doors

D. Section 088000 - Glazing.

E. Section 092900 – Gypsum Drywall Systems.

F. Section 099000 - Painting.

G. Section 102800 - Toilet and Bath Accessories.

1.03 REFERENCES

A. ASTM C804 - Use of Solvent-Release Type Sealants.

B. ASTM C919 - Use of Sealants in Acoustical Applications.

C. ASTM C920 - Elastomeric Joint Sealants.

D. ASTM D1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.

E. ASTM D1565 - Flexible Cellular Materials - Vinyl Chloride Polymers and Copolymers (Open-Cell Foam).

F. SWRI (Sealant, Waterproofing and Restoration Institute) - Sealant and Caulking Guide Specification.

1.04 SUBMITTALS

A. Product Data: Provide data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, color, and adjacent surfaces to be caulked.

B. Samples: Submit 2 samples illustrating full range of sealant colors for selection.

C. Manufacturer's Installation Instructions: Indicate special procedures, surface preparation, perimeter conditions requiring special attention.

1.05 QUALITY ASSURANCE

A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

B. Maintain one copy of each document on site.

1.06 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum five years experience.

B. Applicator: Company specializing in performing the work of this section with minimum five years experience.

1.07 ENVIRONMENTAL REQUIREMENTS: Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.

1.08 COORDINATION: Coordinate the work with all sections referencing this section.

1.9 WARRANTY

A. Provide five year warranty for all sealant work under provisions of Div. 1.

B. Warranty: Include coverage for installed sealants and accessories which fail to achieve water tight seal, exhibit loss of adhesion or cohesion, or do not cure.

PART 2 - PRODUCTS

2.01 SEALANT MATERIALS

A. Exterior: One-part, non-sag, moisture-cure, high-performance polyurethane sealant:

Product: Equal of BASF Sonolastic NP 1 ASTM C 920, Type S, Grade NS, Class 35, Use NT, M A, and I.

Performance Requirements:
1. Durometer Hardness, ASTM C-661, Shore A: 25-30
2. Ultimate Tensile Strength, ASTM D-412: 350 psi
3. Ultimate Elongation, ASTM D-412: 800 percent elongation
4. Movement Capability, ASTM C-719: +/-35% sustained through weathering
5. Peel Strength, ASTM C-794: 30 pli

6. Staining, ASTM C-1248: Passes with no staining indicated for granite, limestone, brick or concrete

B. Exterior Traffic/Horizontal Joints: One-part, moisture-curing, low-modulus polyurethane sealant. Traffic-rated, pourable, semi-self-leveling, primerless adhesion and excellent movement capability.

Product Basis of Design: Tremco Vulkem 45SSL

Performance Requirements:

1. Durometer Hardness, ASTM C-661, Shore A: 40-45
2. Ultimate Tensile Strength, ASTM D-412: 250-300 psi
3. Ultimate Elongation, ASTM D-412: 600-750% elongation
4. Movement Capability, ASTM C-719: +100%/-50% sustained through weathering

C. Expanding Foam Sealer: Preformed expanding foam sealant providing watertight secondary sealing in wall applications. Open-cell polyurethane foam impregrnated with non-drying, water-based, stabilized, polymer-modified acrylic adhesive.

Mildew Resistance: Excellent
Water Penetration of Curtain Walls by Uniform Static Air Pressure Difference: Passed up to 20.88 PSF – ASTM E283
Temperature Range – ASTM C711
High Permanent – 185 deg. F.
Low Permanent - -40 deg. F.

Basis of Design: Emseal Backerseal (Greyflex), or equal by Willseal.

D. Interior: Silicone-modified acrylic latex caulking compound, movement 7-1/2% in expansion and compression. Paintable. Equal of Pecora AC-20 + Silicone.

E. Sanitary Sealant: Mold and mildew resistant. Equal GE SCS1700 silicone sealer.

2.02 ACCESSORIES

A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.

B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.

C. Joint Backing: ASTM D1056 D1565; round, closed cell polyethylene foam rod; oversized 30 to 50 percent larger than joint width.

D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

PART 3 – EXECUTION

3.01 EXAMINATION

A. Verify that substrate surfaces and joint openings are ready to receive work.

B. Verify that joint backing and release tapes are compatible with sealant.

C. Coordinate with penetrating sealing work for masonry. If joints are not sealed prior to application of penetrating sealer joints will have to be cleaned of all penetrating sealer prior to application of joint sealers.

3.02 PREPARATION

A. Remove loose materials and foreign matter which might impair adhesion of sealant.

B. Clean and prime joints in accordance with manufacturer's instructions.

C. Perform preparation in accordance with manufacturer's instructions.

D. Protect elements surrounding the work of this section from damage or disfiguration.

3.03 INSTALLATION

A. Install sealant in accordance with manufacturer's instructions.

B. Install sealant to be straight and non-waving in joints.

C. Install bond breaker where joint backing is not used.

D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.

E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.

F. Tool joints concave, dense and consistent.

G. Provide foam sealer as shown in drawings. Entirely fill spaces.

3.3 CLEANING: Clean adjacent soiled surfaces and remove all sealant from adjacent surfaces.

3.4 PROTECTION OF FINISHED WORK: Protect sealants until cured.

END OF SECTION

SECTION 081113

STEEL (HOLLOW METAL) DOORS AND FRAMES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following products manufactured in accordance with SDI Recommended Standards:

1. Doors: Standard steel doors for interior and exterior locations.

2. Frames: Hollow metal frames for doors, sidelights, borrowed lights, windows, and other interior and exterior openings of following type:

a. Welded unit type.

3. Provide factory primed doors and frames to be field painted.

B. Joint sealers are specified in Section 079200.

C. Aluminum storefront framing and doors are specified in Section 084413.

D. Door hardware is specified in Section 087100.

E. Glass is specified in Section 088000.

1.3 SUBMITTALS

A. Product data for each type of door and frame specified, including details of construction, materials, dimensions, hardware preparation, core, label compliance, profiles, and finishes.

B. Shop drawings showing fabrication and installation of standard steel doors and frames. Include details of each frame type, elevations of door design types, conditions at openings, details of construction, location and installation requirements of door and frame hardware and reinforcements, and details of joints and connections. Show anchorage and accessory items.

1. Provide schedule of doors and frames using same reference numbers for details and openings as those on contract drawings.

2. Indicate coordinate of glazing frames and stops with glass and glazing requirements.

1.4 QUALITY ASSURANCE: Provide doors and frames complying with Steel Door Institute "Recommended Specifications Standard Steel Doors and Frames" ANSI/SDI-100 and as herein specified.

1.5 REGULATORY REQUIREMENTS

A. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings and temperature-rise limits indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

1. Smoke- and Draft-Control Assemblies: Provide an assembly with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.

B. Fire-Rated, Borrowed-Light Assemblies: Complying with NFPA 80 and listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction for fire-protection ratings indicated, based on testing according to NFPA 257 or UL 9.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver doors and frames cardboard-wrapped or crated to provide protection during transit and job storage. Provide additional protection to prevent damage to finish of factory-finished doors and frames.

B. Inspect doors and frames upon delivery for damage. Minor damages may be repaired provided refinished items are equal in all respects to new work and acceptable to Architect; otherwise, remove and replace damaged items as directed.

C. Store doors and frames at building site under cover. Place units on minimum 4-inches high wood blocking. Avoid use of non-vented plastic or canvas shelters which could create humidity chamber. If cardboard wrapper on door becomes wet, remove carton immediately. Provide 1/4" spaces between stacked doors to promote air circulation.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A 569 and ASTM A 568.

B. Cold-Rolled Steel Sheets: Commercial quality carbon steel, complying with ASTM A 366 and ASTM A 568.

1. Exterior Doors, Frames and Framing: Provide with metallic coating conforming to ASTM A924 for hot dip galvanization.

C. Supports and Anchors: Fabricate of not less than 18-gage sheet steel. For anchorage to steel stud partitions provide anchors welded to frame.

D. Inserts, Bolts, and Fasteners: Manufacturer's standard units. Where items are to be built into exterior walls, hot-dip galvanize in compliance with ASTM A 153, Class C or D as applicable.

E. Shop Applied Paint: Apply after fabrication.

1. Primer: Rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints complying with ANSI A224.1, "Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames."

2.2 DOORS

A. Provide metal doors of SDI grades and models specified below:

1. ANSI/SDI-100

a. Exterior Doors: Grade III, extra heavy-duty, minimum 18-gage cold-rolled sheet steel faces. Provide seamless faces with edge seams welded and ground. Exterior doors shall have expanded polystyrene foam infill and shall be additionally reinforced for all applied hardware. Minimum 7" top rail with seamless top channel caps.

b. Interior Doors: Grade II, heavy-duty, minimum 18 ga. cold-rolled steel faces. Provide seamless faces with edge seams welded and ground. Interior doors shall have resin-impregnated honeycomb core and shall be additionally reinforced for all applied hardware.

c. Reinforce vertical edges with minimum 16 ga. x 1.75" channels with 1" returns.

1) Glass stops shall be 16 ga. steel channels, factory installed and through-fastened with countersunk flathead machine screws.

d. Provide inverted bottom closure channel for all doors.

e. Lock and hinge stiles shall be accurately mortised and reinforced to receive scheduled hardware. Reinforcement shall be not less than 3/16" thick steel drilled and tapped to receive hinges and locks. From the top edge of all doors and located 3" from the top, install a 16" x 14 ga. channel to separate the faces of the door, and two reinforcing plates 22" x 4.5" x 12 ga. to suit closers. Install spreaders for panic hardware which requires through-bolts. Reinforce for push plates, escutcheons, and similar items with 14 ga. sheet.

2.3 FRAMES

A. Provide metal frames for wood and steel doors, sidelights, borrowed lights, interior and exterior windows, and other openings, of types and styles as shown on drawings and schedules. Conceal fastenings, unless otherwise indicated.

1. Fabricate frames with mitered or coped corners, welded construction for all applications.

2. Form all exterior door frames from 14-gage steel and all interior frames from 16 ga. steel, except all pairs shall be 14 ga.

3. Provide 4 wall anchors per jamb, plus a floor anchor, with mortar boxes for all hardware, 16 ga.

4. All rabbets shall be sized and hinge preparations performed to accommodate seals and gaskets (to allow doors to close properly).

B. Door Silencers: Except on weatherstripped frames or frames with smoke or sound seals, drill stops to receive 3 silencers on strike jambs of single-door frames and 2 silencers on heads of double-door frames.

2.4 FABRICATION

A. Fabricate steel door and frame units to be rigid, neat in appearance and free from defects, warp or buckle. Wherever practicable, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory-assembled before shipment, to assure proper assembly at project site. Comply with ANSI/SDI-100 requirements.

1. Clearances: Not more than 1/4 inch at jambs and heads; 3/4" at sill to allow for ½" threshold and door shoe.

B. Fabricate exposed faces of doors and panels from only cold-rolled steel.

C. Tolerances: Comply with SDI 117 "Manufacturing Tolerances for Standard Steel Doors and Frames."

D. Fabricate frames, concealed stiffeners, reinforcement, edge channels, louvers and moldings from either cold-rolled or hot-rolled steel.

E. Exposed Fasteners: Unless otherwise indicated, provide countersunk flat or oval heads for exposed screws and bolts.

F. Hardware Preparation: Prepare doors and frames to receive mortised and concealed hardware in accordance with final Door Hardware Schedule and templates provided by hardware supplier. Comply with applicable requirements of ANSI A115 Series Specifications for door and frame preparation for hardware.

G. Reinforce doors and frames to receive surface-applied hardware. Drilling and tapping for surface-applied hardware may be done at project site.

H. Locate hardware as indicated on final shop drawings or, if not indicated, in accordance with "Recommended Locations for Builder's Hardware on Standard Steel Doors and Frames," published by Door and Hardware Institute.

I. Shop Painting: Clean, treat, and paint exposed surfaces of steel door and frame units.

1. Clean steel surfaces of mill scale, rust, oil, grease, dirt, and other foreign materials before application of paint.
2. Apply shop coat of prime paint of even consistency to provide a uniformly finished surface ready to receive finish paint.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Install steel doors, frames, and accessories in accordance with final shop drawings, manufacturer's data, and as herein specified.

B. Placing Frames: Comply with provisions of SDI-105 "Recommended Erection Instructions For Steel Frames," unless otherwise indicated.

1) In metal-stud partitions, provide at least three wall anchors per jamb; install adjacent to hinge location on hinge jamb and at corresponding heights on strike jamb. Attach wall anchors to studs with screws.

2) Masonry Walls: Coordinate installation of frames to anchor into masonry as it goes up and to allow for solidly filling space between frames and masonry with grout.

a) If, for some reason, use of post-installed “punched and dimpled” frames are utilized, all anchorage points shall be filled, sanded, and primed ready for paint to be invisible in the final work.

C. Door Installation: Fit hollow metal doors accurately in frames, within clearances specified in ANSI/SDI-100.

D. Light Stops: Install toward exterior side of exterior frames. Use tamper-proof screws.

3.2 ADJUST AND CLEAN

A. Prime Coat Touch-up: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

B. Final Adjustments: Check and readjust operating hardware items, leaving steel doors and frames undamaged and in complete and proper operating condition.

END OF SECTION 081113

SECTION 081416

FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS:

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.2 SUMMARY:

A. Extent and location of each flush wood door is indicated on drawings and in schedules.

B. Type of doors required is the following:

1. Solid core flush wood doors with wood veneer faces.

C. Shop-priming, factory-finishing, and factory-premachining for hardware for wood doors is included in this section.

D. Hollow metal frames are specified in Section 081113.

1.3 SUBMITTALS:

A. Product Data: Door manufacturer's technical data for each type of door, including details of core and edge construction, trim for openings and louvers, and factory-finishing specifications.

B. Shop Drawings: Submit shop drawings indicating location and size of each door, elevation of each kind of door, details of construction, location and extent of hardware blocking, fire ratings, requirements for factory finishing and other pertinent data.

C. Samples: Submit 3 samples of specified veneer with finish, or range of finish variation, to be anticipated on doors, 1-0" square for factory-finished doors.

1.4 QUALITY ASSURANCE:

A. Quality Standards: Comply with the following standards:

1. NWWDA Quality Standard: I.S.1 "Industry Standard for Wood Flush Doors", of National Wood Window and Door Association (NWWDA).

2. Architectural Woodwork Institute and Woodwork Institute “Architectural Woodwork Quality Standards” – Edition 1.

B. NWWMA Quality Marking: Mark each wood door with NWWDA Wood Flush Door Certification Hallmark certifying compliance with applicable requirements of NWWDA I.S. 1 Series.

1. For manufacturers not participating in NWWDA Hallmark Program, a certification of compliance may be substituted for marking of individual doors.

1.4 PRODUCT DELIVERY, STORAGE, AND HANDLING: Protect doors with plastic bags during transit, storage and handling to prevent damage, soiling and deterioration. Comply with requirements of referenced standards and recommendations of NWWDA pamphlet "How to Store, Handle, Finish, Install, and Maintain Wood Doors", as well as with manufacturer's instructions.

1.5 PROJECT CONDITIONS: Conditioning: Do not deliver or install doors until conditions for temperature and relative humidity have been stabilized and will be maintained in storage and installation areas during remainder of construction period to comply with the following requirements applicable to project's geographical location:

1.6 WARRANTY:

A. General: Warranties shall be in addition to, and not a limitation of, other rights the Owner may have under the Contract Documents.

B. Door Manufacturer's Warranty: Submit written agreement in door manufacturer's standard form signed by Manufacturer, Installer and Contractor, agreeing to repair or replace defective solid core interior doors that have warped (bow, cup or twist) or that show telegraphing of core construction in face veneers, delamination, or do not conform to tolerance limitations of referenced quality standards.

1. Warranty shall also include reinstallation and refinishing which may be required due to repair or replacement of defective doors where defect was not apparent prior to hanging.

2. Warranty shall be in effect during following period of time after date of Substantial Completion: Lifetime of installation.

PART 2 - PRODUCTS

2.1 INTERIOR FLUSH WOOD DOORS:

A. Solid Core Doors for Transparent Finish: Comply with the following requirements:

1. Faces: Rotary Sliced Select White Maple, book matched.
2. AWI Grade: A
3. Match between Veneer Leaves: Book match.
4. Assembly of Veneer Leaves on Door Faces: Balance match.

5. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
6. Room Match: Match door faces within each separate room or area of building. Corridor door faces do not need to match where they are more than 20 ft. apart.
7. Construction: PC-5 (Particleboard core, 5-ply faces), with stiles and rails glued to core and sanded before laminating, and all doors assembled with Type I adhesive. Provide solid wood blocking for closers, exit devices, and locksets. Stiles and rails shall be of solid hardwood, 1-1/8" minimum for rails, 1-3/8" minimum for stiles. Surrounds for light openings shall be compatible hardwood, 6" minimum on all sides.

2.2 FABRICATION:

A. Fabricate flush wood doors to produce doors complying with following requirements:

1. In sizes indicated for job-site fitting.
2. Doors shall be machined for hardware at the site.

B. Openings: Cut and trim openings through doors to comply with applicable requirements of referenced standards for kind(s) of doors required.

2.3 FACTORY FINISHING:

A. General: Comply with referenced Woodwork Standards – Section 5 – Finishing to prefinish wood doors at factory.

B. Transparent Finish: Comply with requirements indicated for grade, finish system, staining effect and sheen. Finish all surfaces of doors. Reseal all surfaces cut or trimmed after finishing doors.

1. Grade: Custom.
2. Factory finish doors in accordance with WDMA I.S.1A or AWS Quality Standards. Factory finish to be water based stain with ultraviolet (UV) cured polyurethane sealer. Finish must meet or exceed performance standards of UV cured polyurethane (TR-6) or (System 9).
3. Staining: Light honey tone as selected.
4. Effect: Close grain finish.
5. Sheen: Satin-medium rubbed effect (35 deg. gloss).

PART 3 - EXECUTION

3.1 EXAMINATION:

A. Examine installed door frames prior to hanging door:

1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with plumb jambs and level heads.

2. Reject doors with defects.

B. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION:

A. Hardware: Coordinate with Section 087100 - Finish Hardware.

B. Manufacturer's Instructions: Install wood doors in HM frames to comply with manufacturer's instructions and of referenced AWI standard and as indicated.

C. Job-Fit Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted with fire-rated doors. Machine doors for hardware. Seal all cut surfaces after fitting and machining (including cutouts, edges, tops and bottoms of doors).

1. Fitting Clearances for Doors: Provide 1/8" at jambs and heads; 1/16" per leaf at meeting stiles for pairs of doors; and 1/8" from bottom of door to top of floor finish. Where threshold is shown or scheduled, provide 1/4" clearance from bottom of door to top of threshold. Comply with NFPA 80 for fire-rated doors.

D. Factory-Finished Doors: Restore finish before installation as required. The Owner will not accept doors which show signs of repair. Seal all edges or penetrations cut after finishing or in the field using a VOC compliant sealer.

3.3 ADJUSTING AND PROTECTION:

A. Operation: Rehang or replace doors which do not swing or operate freely.

B. Finished Doors: Refinish or replace doors damaged during installation.

C. Protect doors and panels as recommended by manufacturer to ensure that they will be without damage or deterioration at time of Substantial Completion.

END OF SECTION 081416

SECTION 08 33 00

INSULATED ROLLING SERVICE DOOR

PART 1 GENERAL

1.1 SUMMARY

A. **Section Includes:** Electric operated overhead insulated rolling doors

B. **Related Sections:**
1. 05 50 00 Metal Fabrications. Door opening jamb and head members.
2. 06 10 00 Rough Carpentry. Door opening jamb and head members.
3. 08 31 00 Access Doors and Panels. Access doors.
4. 08 70 00 Hardware. Padlocks. Masterkeyed cylinder.
5. 09 91 00 Painting. Field painting.
6. Division 26. Electrical wiring and conduit, fuses, disconnect switches, connection of operator to power supply, and installation of control station and wiring.

C. **Products That May Be Supplied, But Are Not Installed Under This Section:**
1. **Control Station**

1.2 SYSTEM DESCRIPTION

A. **Design Requirements:**
1. **Wind Loading:**
a. Supply doors to withstand up to 99 mph design wind load
a. Supply doors to be operational up to 20 PSF maximum wind load
2. **Cycle Life:**
a. Design doors of standard construction for normal use of up to 20 cycles per day maximum, and an overall maximum of 50,000 operating cycles for the life of the door
3. **Seismic Performance:**
a. Provide manufacturer’s seismic calculations confirming ASCE7-10

4. **Insulated Door Slat Material Requirements:**
a. Flame Spread Index of 0 and a Smoke Developed Index of 10 as tested per ASTM E84
b. Sound Transmission Class (STC) rating up to 30 for the curtain and up to 22 for the entire assembly. If an STC of 32 is desired, additional options are required. All configurations are evaluated per ASTM E90 and based on testing a complete, operable assembly.
c. Minimum R-value of 8.0 (U-value of 0.125) as calculated using the ASHRAE Handbook of Fundamentals
d. Insulation to be CFC Free with an Ozone Depletion Potential (ODP) rating of zero
5. **Safety:**
a. Chain operated doors shall be designed so that the door immediately stops upward or downward travel and is maintained in a stationary position when the hand chain is released by user.

6. **New Product:**
a. This is a new product that has been developed by CornellCookson. Alternate manufacturers may be unable to meet the specification.

1.3 SUBMITTALS

A. Reference Section 01 33 00 Submittal Procedures; submit the following items:
1. **Product Data**

2. **Shop Drawings:** Include special conditions not detailed in Product Data. Show interface with adjacent work.

3. **Quality Assurance/Control Submittals:**
   a. Provide manufacturer ISO 9001:2015 registration
   b. Provide manufacturer and installer qualifications - see below
   c. Provide manufacturer's installation instructions

4. **Closeout Submittals:**
   a. Operation and Maintenance Manual
   b. Certificate stating that installed materials comply with this specification

1.4 QUALITY ASSURANCE

A. **Qualifications:**
   1. **Manufacturer Qualifications:** ISO 9001:2015 registered and a minimum of five years experience in producing doors of the type specified

   2. **Installer Qualifications:** Manufacturer's approval

1.5 DELIVERY STORAGE AND HANDLING

A. Reference Section 01 66 00 Product Storage and Handling Requirements

B. Follow manufacturer's instructions

1.6 WARRANTY

A. Standard Warranty: Two years from date of shipment against defects in material and workmanship

B. Maintenance: Submit for owner’s consideration and acceptance of a maintenance service agreement for installed products

PART 2 PRODUCTS

2.1 MANUFACTURER

A. **Manufacturer:**

   1. **Cornell:** 24 Elmwood Avenue, Mountain Top, PA 18707. Telephone: (800) 233-8366.
   2. **Cookson**
   3. **Clopay Building Products**

   Substitutions: Not permitted without prior-approval by Architect.

2.2 PRODUCT INFORMATION

A. **Model:** ESD20

2.3 MATERIALS

A. **Curtain:**
   1. **Fabrication:**

      a. **Slat Material:** No. 6F, (Listed Exterior/Interior):
         1) **Galvanized Steel/Galvanized Steel (No Paint Finish):** Manufacturer recommended gauge based on performance requirements. Minimum 24/24 gauge, Grade 40, ASTM A 653 galvanized steel zinc coating.
      b. **Insulation:** 7/8 inch (22 mm) foamed-in-place, closed cell urethane
      c. **Total Slat Thickness:** 15/16 inch (24 mm)

d. **Flame Spread Index** of 0 and a **Smoke Developed Index** of 10 as tested per ASTM E84
e. **R-value:** 8.0
f. **STC Rating:** Up to 32 for the curtain and up to 22 for the entire assembly, as tested per ASTM E90 and based on testing a complete, operable assembly

2. **Exterior Slat Finish:**

a. **GalvaNex™ Coating System (Stock Colors):**
1) ASTM A 653 galvanized base coating treated with dual process rinsing agents in preparation for chemical bonding baked-on base coat and baked-on polyester enamel finish coat

3. **Interior Slat Finish:**

a. **GalvaNex™ Coating System (Stock Colors):**
1) ASTM A 653 galvanized base coating treated with dual process rinsing agents in preparation for chemical bonding baked-on base coat and baked-on polyester enamel finish coat

B. **Endlocks:** Fabricate interlocking sections with high strength endlocks on alternate slats each secured with two ¼" (6.35 mm) rivets. Provide windlocks as required to meet specified wind load.
1. **Nylon:** Required up to 21'-5" width (DBG - Distance Between Guides)
1. **Galvanized cast iron:** Required if above 21'-5" width (DBG - Distance Between Guides)

C. **Bottom Bar**
1. **Configuration:**
a. **Insulated Bottom Bar:** Reinforced extruded aluminum interior face with full depth insulation and exterior skin slat to match curtain material and gauge. Minimum 4" tall x 1-1/16" thickness.

2. **Finish:**
a. **Exterior:** Match slats

D. **Guides:**
1. **Fabrication:**
a. Minimum 3/16 inch (4.76 mm) structural steel angles. Provide windlock bars of same material when windlocks are required to meet specified wind load. Top of inner and outer guide angles to be flared outwards to form bellmouth for smooth entry of curtain into guides. Provide removable guide stoppers to prevent over travel of curtain and bottom bar.

Top 16 ½" (419.10 mm) of coil side guide angles to be removable for ease of curtain installation and as needed for future curtain service.

2. **Finish:**

a. **Powder Coat (Stock Colors):** Zirconium treatment followed by a baked-on polyester powder coat; minimum 2.5 mils (0.065 mm) cured film thickness

E. **Counterbalance Shaft Assembly:**
1. **Barrel:** Steel pipe capable of supporting curtain load with maximum deflection of 0.03 inches per foot (2.5 mm per meter) of width
2. **Spring Balance:** Oil-tempered, heat-treated steel helical torsion spring assembly designed for proper balance of door to ensure that maximum effort to operate will not exceed 25 lbs (110 N). Provide wheel for applying and adjusting spring torque.

F. **Brackets:**

Fabricate from minimum 3/16 inch (5 mm) steel plate with permanently lubricated ball or roller bearings at rotating support points to support counterbalance shaft assembly and form end closures

1. **Finish:**

    a. **Powder Coat (Stock Colors):** Zirconium treatment followed by a baked-on polyester powder coat; minimum 2.5 mils (0.065 mm) cured film thickness

G. **Hood:**

Minimum 24 gauge galvanized steel with reinforced top and bottom edges. Provide minimum 1/4 inch (6.35 mm) steel intermediate support brackets as required to prevent excessive sag.

1. **Finish:**

    a. **GalvaNex™ Coating System (Stock Colors):**

        1) ASTM A 653 galvanized base coating treated with dual process rinsing agents in preparation for chemical bonding baked-on base coat and baked-on polyester enamel finish coat

H. **Weatherstripping:**

1. **Bottom Bar:**

    a. **Bottom Bar, Motor Operated Doors:** Sensing/weather edge with neoprene astragal extending full width of door bottom bar

2. **Guides:** Replaceable vinyl strip on guides sealing against both sides of curtain
3. **Hood:** Neoprene/rayon baffle to impede air flow above coil
4. **Lintel Seal:** Nylon brush seal fitted at door header to impede air flow

2.4 OPERATION

A. **Motor – Standard Use – Model MG (Industrial Duty Gear Head) Operator:** The operator must not extend above or below the door coil when mounted front-of-coil. Rated for a maximum of 20 cycles per hour (not to be used for consecutive hours) cULus listed (to comply with UL requirements in The United States and Canada), Totally Enclosed Non Ventilated gear head operator(s) rated 3/4 hp, 120 Volts, Single Phase. Provide complete with electric motor and factory pre-wired motor control terminals, maintenance free solenoid actuated brake, emergency manual chain hoist and control station(s). Motor shall be high starting torque, industrial type, protected against overload with an auto-reset thermal sensing device. Primary speed reduction shall be heavy-duty, lubricated gears with mechanical braking to hold the door in any position. Operator shall be equipped with an emergency manual chain hoist assembly that safely cuts operator power when engaged. A disconnect chain shall not be required to engage or release the manual chain hoist. Operator drive and door driven sprockets shall be provided with #50 roller chain. Provide an integral Motor Mounted Interlock system to prevent damage to door and operator when mechanical door locking devices are provided. Operator drive and door driven sprockets shall be provided with minimum #50 roller chain. Operator shall be capable of driving the door at a speed of up to 9” per second or as recommended for door size. Fully adjustable, driven linear screw type cam limit switch mechanism shall synchronize the operator with the door. The electrical contractor shall mount the control station(s) and supply the appropriate disconnect switch, all conduit and wiring per the overhead door wiring instructions.

B. **Control Station:**

1. **Surface mounted:** "Open/Close/Stop" push buttons; NEMA 1

C. **Control Operation:**

1. **Momentary Contact to Close:**

Fail-safe, UL325-2010 Compliant Entrapment Protection for Motor Operation.

    a. **SafetyGard UL325 Light Curtain with Dynamic Sequential Blanking:** Provide monitored, non-contact light curtain consisting of a transmitter and a receiver to

be mounted to the guide assembly of the door in the provided mounting channel, projecting a thru beam across the width of the door for the height of the light curtain (3ft or 6ft depending on opening size of the door). Interruption of beam before door fully closes shall cause door to immediately stop downward travel and reverse direction to the fully opened position

2. **Sensing/Weather Edge:** Automatic reversing control by an automatic sensing switch within neoprene or rubber astragal extending full width of door bottom bar.

a. **Electric sensing edge device.** Provide a wireless sensing edge connection to motor operator eliminating the need for a physical traveling electric cord connection between bottom bar sensing edge device and motor operator.

2.5 ACCESSORIES

A. **Locking:**
1. **None** (Uses motorized controls to secure.)

B. **Strip Door Bracket**: Assembly integral to coiling door to hang strip door on interior of building. Contact factory for sizes greater than 12'-0" x 12-0". Powder coated finish to match coiling door.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates upon which work will be installed and verify conditions are in accordance with approved shop drawings
B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates
C. Commencement of work by installer is acceptance of substrate

3.2 INSTALLATION

A. General: Install door and operating equipment with necessary hardware, anchors, inserts, hangers and supports
B. Follow manufacturer's installation instructions

3.3 ADJUSTING

A. Following completion of installation, including related work by others, lubricate, test, and adjust doors for ease of operation, free from warp, twist, or distortion

3.4 CLEANING

A. Clean surfaces soiled by work as recommended by manufacturer
B. Remove surplus materials and debris from the site

3.5 DEMONSTRATION

A. Demonstrate proper operation to Owner's Representative
B. Instruct Owner's Representative in maintenance procedures

END OF SECTION

SECTION 084113

ALUMINUM ENTRANCES AND STOREFRONTS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Aluminum doors and window wall frames.

1.02 QUALITY ASSURANCE

A. Standards: Except as otherwise indicated, the requirements for aluminum doors and frames, and the terminology used in this Section, are those of NAAMM, AAMA and AA and in particular, those of the "Entrance Manual" by NAAMM.

1.03 SUBMITTALS

A. Submit shop drawings showing frames layout, profiles, components, anchoring and finish colors.

1.04 PROJECT/SITE CONDITIONS

A. Field Measurements:
1. Whenever possible, check the actual openings in the construction Work by accurate field measurement before fabrication, and show recorded measurements on final shop drawings.
2. However, coordinate fabrication schedule with construction progress as directed and avoid delays of the Work.
3. Where necessary, proceed with fabrication without field measurement, and coordinate installation tolerances to ensure proper fit of units.

1.05 WARRANTY

System shall be warranted against failure and/or deterioration of metals due to manufacturing process for a period of two years from installation.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Specifications are based on AFG451T Series 2" X 4-1/2" and the A400 Series 1-3/4” X 4" Center Glazed System as manufactured by Arcadia Inc.

B. Products equaling or exceeding quality requirements manufactured by Southwest Aluminum, Systems, Inc., Chandler, AZ, United States Aluminum Corporation, Vernon, CA.

2.02 MATERIALS

A. Framing members, transition members, mullions, adapters, and mountings: Extruded 6063 T5 aluminum alloy (ASTM B221 - Alloy G.S. 10a-T5). All exposed surfaces shall be free of scratches or blemishes and shall receive an AA-M12-C22-A31 clear anodized finish.

B. Screws, miscellaneous fastening devices, and internal components: Aluminum, stainless steel, or zinc plated steel in accordance with ASTM A-164. Perimeter anchors shall be aluminum or steel, providing the steel is properly isolated from the aluminum.

C. Glazing gaskets: EPDM elastomeric extrusions.

D. Steel Sections: ANSI/ASTM A36; shaped to suit mullion sections.

E. Finish Hardware: Provide manufacturers door hardware in matching finish including but not limited to items scheduled in Section 08710. Lock cylinders shall have removable cores as scheduled.

F. Color: Dark Bronze Anodized.

2.03 FABRICATION

A. General
1. Complete the cutting, fitting, forming, drilling, and grinding of metal work prior to cleaning, finishing, treatment, and application of coatings.
2. Conceal fasteners, wherever possible.
3. Maintain continuity of line and accurate relation of planes and angles.
4. Provide secure attachment and support at mechanical joints, with hairline fit of contacting members.
5. Reinforce the Work as necessary for performance requirements, and for support to the structure.
6. Separate dissimilar metals with bituminous paint or preformed separators which will prevent corrosion.

B. Frames:
1. Fabricate tubular assemblies as shown, with either welded or mechanical joints in accordance with Manufacturer's standards, with concealed fasteners wherever possible.
2. Provide members of the size, shape, and profile shown.
3. Reinforce internally with steel channel shapes as shown, or as necessary to support exposure C wind loads.
4. Weatherstripping: Provide compression weatherstripping on door-contact face of door stops on exterior door frames and/or other frames where indicated.
5. Glass framing members shall provide for flush glazing with through sight lines, without projecting stops for glass.
6. Provide glazing system for frames to receive lights. Design system for replacement of glass, but for non-removal of glass from exterior.
7. System shall provide resilient settings for glass by use of EPDM elastomeric extrusions.
8. Fabricate frame assemblies for exterior walls with flashing and weeps to drain penetrating moisture to exterior.

9. Provide anchorage and alignment brackets for concealed support of assembly from the building structure.
10. Allow for thermal expansion of exterior units.
11. Include flashing in conjunction with components as detailed, finished to match.

C. Aluminum Doors:
1. Performance: Resistance to corner racking shall be tested by the Dual Moment Load test as follows:
   a. Test section shall consist of standard top door corner assembly. Side rail section shall be 24 inches long and top rail section 12 inches (300mm) long.
   b. Anchor "top rail" positively to test bench so that corner protrudes 3 inches beyond bench edge.
   c. Anchor a lever arm positively to side rail at a point 19 inches from inside edge of top rail. Attach weight support pad at a point 19 inches from inner edge of side rail.
   d. Test section shall withstand a load of 270 pounds on the lever arm before reaching the point of failure, which shall be considered a rotation on the lever arm in excess of 45°.
2. Materials: Sections shall be extruded for 6063-T5 aluminum alloy (ASTM B221 - Alloy G.S. 10A T5).
3. Fasteners, where exposed, shall be aluminum, stainless steel or plated steel in accordance with ASTM A-164. Perimeter anchors shall be aluminum or steel, providing the steel is properly isolated from the aluminum.
4. Glazing gaskets shall be EPDM elastomeric extrusions.
5. Major portions of the door stiles shall be 0.125 inch in thickness and glazing molding shall be 0.050 inch thick.
6. Construction:
   a. Vertical Stiles: 8 inches.
   b. Top Rail: 8 inches .
   c. Bottom Rail: 10 inches.
   d. Corner construction: Both sigma deep penetration and fillet weld and mechanical clip fastening.
   e. Glazing stops: Snap-in type with EPDM glazing gaskets.
7. Door shall be weatherstripped on 3 sides with metal-backed pile cloth installed in door and/or frame. A weathered adjustable astragal with stainless steel backing shall be provided as pivoted stiles and at meeting stiles of pairs of doors. Bottom shall be weathered with an EPDM blade gasket sweep strip applied with concealed fasteners.
8. Hardware: Provide the following items:
   a. Hinges, push-pulls, locks, closers, threshold, weatherstrip, door bottom, and flush bolts: As specified in Section 08710.
   b. Cylinder: As specified in Section 08710.

D. Hardware Installation at Factory:
1. Cut, reinforce, drill and tap frames as required to receive hardware except do not drill and tap for surface-mounted items until the time of installation at the Project Site. Comply with Hardware Manufacturer's instructions and template requirements. Use concealed fasteners wherever possible.
2. Install hardware, except surface-mounted hardware, at fabrication plant. Remove only as required for final finishing operations, and for delivery and installation of the Work at the Project Site.

PART 3 EXECUTION

3.01 INSTALLATION

A. Comply with Manufacturer's Specifications and recommendations for the installation of aluminum doors and frames.
   1. Furnish necessary material, labor, and equipment for the complete installation of the following: glass framing, vertical and horizontal mullions, transitional members connecting these components, adapters and mountings for trim moldings and facing materials.
   2. Set units plumb, level and true in line, without warp or rack of frames, doors or panels.
   3. Anchor securely in place.
   4. Separate aluminum and other corrodible metal surfaces from sources of corrosion or electrolytic action at points of contact with other materials.
   5. Set sill members and other members in a bed of compound as shown, or with joint fillers or gaskets as shown to provide weather-tight construction.

B. See Section 08800 for installation of glass shown to be glazed into frames .

3.02 CLEANING

A. Clean aluminum surfaces promptly after installation of frames, exercising care to avoid damage of the protective coating.

B. Remove excess glazing and sealant compounds, dirt, and other substances.

END OF SECTION

SECTION 087100

DOOR HARDWARE

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Hardware and related items for interior and exterior doors, other than specified in specific door sections.

1.02 SYSTEM DESCRIPTION

A. Performance Requirements: The Manufacturer or Authorized Distributor shall confirm that there is an established local agency which stocks a full complement of parts and offers service during normal working hours for the finish hardware to be furnished and that the agency will supply parts without delay and at reasonable cost.

B. Furnish hardware items of proper design for use in doors and frames of the thicknesses, profile, security and similar requirements indicated, as necessary for proper installation and function, regardless of omissions or conflicts in the information in the Contract Documents. It is the responsibility of the General Contractor and subcontractor to review the complete drawings and schedule and shall identify any discrepancy to the Architect prior to ordering and confirming material. Review and pricing of the door schedule alone shall not relieve the general contractor or subcontractor from delivering fully-functioning and appropriate hardware for each door in the project. If there is any question as to the use and functionality of any door or hardware seek clarification from the Architect prior to ordering and/or pricing hardware material.

C. While Hardware Schedule is intended to cover all doors and other movable parts of the building and establish a type and standard of quality, examine plans and specifications and furnish proper hardware for all openings whether listed or not. All hardware must meet applicable handicapped access standards, ordinances and codes. If there are any omissions or corrections in hardware groups, call them to the attention of the Architect prior to bid opening for instructions. No extras will be allowed for omissions, changes or corrections necessary to facilitate proper installation. The Work of this Section will be the total responsibility of one subcontractor and/or his suppliers and shall cover the complete coordination of related work in other Sections.

This Section includes the furnishings of all finish hardware and related items. If an item is not listed but will be required in a similar situation, furnish equal hardware to that listed in similar locations if practicable. If no similar location specifies, then use hardware in keeping with that specified.

1.03 SUBMITTALS

A. Submit shop drawings and product data of each type of hardware required for Project, in accordance with Section 01300. Indicate the following:
   1. Style and finish.
   2. Locations and mounting heights of each item of hardware. Use established numbering system.
   3. Include a complete listing of equipment and materials including manufacturer, catalog number, finish, diagrams, (including cut-sheets), schematics and all other pertinent data.

B. Templates: Supply to Door and Frame Manufacturer(s) to enable proper and accurate sizing and locations of cutouts for hardware.

C. Certification: At the completion of installation, Hardware Supplier shall certify that material is properly installed according to Manufacturers printed instructions.

D. Operating and Maintenance Data: Submit in accordance with Section 01700. Provide Owner with Manufacturer's parts list and maintenance instructions for each type of hardware supplied and necessary wrenches and tools required for proper maintenance of hardware.

1.04 QUALITY ASSURANCE

A. Comply with the following standards:
   1. ANSI A117.1 - Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People.
   2. ANSI/NFPA 80 - Fire Doors and Windows.
   3. UL Standard 305 - Panic Hardware.

B. Supplier Qualifications:
   1. Employ an AHC member of the DHI.
   2. Factory authorized stocking distributor of the approved items.
   3. Holder of legally required licenses.

C. Manufacturer Qualifications: 5 years experience in manufacture of comparable systems.

D. Regulatory Requirements:
   1. Hardware listed or furnished shall meet requirements of Federal, State and Local codes having jurisdiction.
   2. Any item furnished or installed that does not meet code requirements shall be removed and proper items substituted at no additional cost or expense to the Owner.
   3. Provide hardware for fire-rated openings in compliance with A.I.A. (NBFU) Pamphlet No. 80 and NFPA Standards No. 80 and No. 101. This requirement shall take precedence over other requirements for such hardware.
   4. Provide hardware which has been tested and listed by U.L. for the types and sizes of doors required, and which complies with the requirements of the doors and door frame labels.
   5. Hardware on all doors leading to or from electrical rooms, mechanical rooms, service stairs, dock areas and the like which represent a hazard to the blind, shall have knurling or abrasive coating on the door lever, handle, or bar which will alert the user to potential perils present. The hardware product and installation shall satisfy all governing handicapped codes.

1.05 DELIVERY, STORAGE AND HANDLING

A. Packing and Shipping: Package each item of hardware in original and individual containers, complete with all necessary fastenings, keys, instructions, and templates for spotting mortising tools.
   1. Mark each container with its item number corresponding to the item number on the finish hardware schedule.
   2. Containers holding locks shall show the following corresponding to that shown on the finish hardware schedule:
      a. Heading number
      b. Door number
      c. Hand of door (when required)

3. A typewritten schedule conforming with the approved schedule shall accompany each shipment.

1.06 WARRANTY

A. Warranty hardware against defects in materials and workmanship for 2 years. Repair, replace or otherwise correct deficient materials at no additional cost to Owner.

PART 2PRODUCTS

2.01 MANUFACTURERS

A. Products equaling or exceeding quality requirements of the specified product as manufactured by the following are acceptable:
1. Butts: Stanley
2. Continuous Hinges: Stanley
3. Exit Devices: Precision
4. Locksets: Best
5. Closers: K2
6. Thresholds, Door Bottoms, Weatherstripping: Pemko.
7. Stops, Pulls, Push Plates: Trimco,
8. Push/Pull Latches: Trimco.

B. To the greatest extent possible, obtain all finish hardware of the same type of item from only one Manufacturer.

2.02 HARDWARE

A. General:
1. Provide items as listed in schedule complete to function as intended.
2. Manufacture hardware supplied for metal doors or jambs to template and secure with machine screws.
3. Where cylindrical locks are used in hollow metal doors, furnish lock reinforcing in the door at the time of manufacture.
4. Furnish finish hardware with all necessary screws, bolts, or other fastenings of suitable; size and type to anchor the hardware in position for heavy use and long life, and of compatible material and finish.
5. Furnish fastenings with anchors according to the material to which it is applied, and as recommended by the Manufacturer.
6. Furnish hardware fastened to concrete with machine screws.
7. Fasten closers and exit devices on metal doors with sex nuts and bolts.

B. Finishes: Dark Bronze, or similar.

C. Hinges:
1. Provide non-removable pins on exterior out swinging doors and reverse bevel interior locked doors.
2. All doors shall have high frequency, (4) ball bearing butts.
3. Flat button, top and bottom tips required.
4. Furnish hinges in the quantity and sizes as listed below:
a. Doors up to 90" in height - 3 hinges
b. Doors over 90" in height - 4 hinges
c. Doors up to 3'0" wide - 4-1/2 X 4-1/2
d. Doors over 3'0" up to 3'4" wide - 5 X 4-1/2
e. Doors over 3'4" wide - heavy duty 5 X 4-1/2

f. Acceptable Manufacturers:
Shall conform to the applicable requirements of Specification FF-H-121c, except as specified otherwise herein.

Stanley	FBB179	FBB168

g. Continuous Gear Hinges:
1. All hinges shall be sized one inch less than door height.
2. All hinges shall be mounted flush with top of door.
3. Type as listed in hardware sets.
4. Finish to be clear satin anodized aluminum.
5. Stanley 661HD

D. Door Locks and Latchsets: Types, series, designs, functions and finishes as listed in hardware sets.
1. Provide interchangeable core locksets with MX8-Cormax
2. Shall conform to the applicable requirements for Series 161 of Specification FF-H-106, except as otherwise specified herein. The series selected shall, as far as practicable, be used throughout the project. All lock and latch sets of a series shall be the products of a single manufacturer. Lock cylinders shall have pin tumblers matching existing school hardware. Accessories such as door coordinators shall conform to the applicable requirements of Specification FF-H-106a (1). Lock and latch design, style and application shall meet handicapped access standards and codes where applicable.
3. All locksets to be heavy duty Best 9K series.
4. Provide locks and latchsets with 2 3/4" brackets, unless otherwise noted. Provide strikes with extended lip where required to protect trim from being marked by latch bolt. Provide wrought boxes with strikes.

D. Door Closers:
1. Door closers shall meet handicapped access standards and codes. Complying with ANSI A117.1 for door opening force and delayed action closing.
2. Surface mounted Bodies to be close grained malleable iron, with three (3) separate control valves (including backcheck). ANSI Grade 1. All closers to be equipped with size adjustment (1 thru 6). Equip all closers mounted on metal doors with sex nuts and bolts.
3. Closers shall be installed on interior of door. Provide EDA arms for parallel applications.
4. Provide D4550/D4551 unless scheduled otherwise.

E. Exit Devices:
1. All to be U.L. approved for casualty. All fire doors to be equipped with rated exit devices meeting fire label requirements. Precision 2100. Except on fire rated doors, wherever closers are provided on doors equipped with exit devices, equip the units with keyed cylinder type dogging device to hold down the push bars and the latch bolt in the open position. Must have tested for 10 million cycles or better.

F. Pocket Door Hardware:
1. Latch: Stanley #102
2. Track & Guide: Stanley PDC 250-00-36

G. Push Plates: 4X 16, US26D

Trimco	1001-3
Quality	40
Rockwood	70C

H. Pull Plates; 4 x 16, us26d

Trimco 1017-3
Quality 400
Rockwood 132 X 70C

J. Overhead Holders or Stops:
ABH 3500 Series

L. Stops and Bumpers: Wall type shall be used when possible. Locate wall bumpers to prevent lockset lever or closer from touching wall.

Wall Stops: Trimco 1270
Quality 302
Rockwood 404
Stanley 3001

Floor Stops:
Trimco 1211
Quality 431
Rockwood
Stanley 3002

M. Silencers:
Supply 3 each at jambs of single doors and 2 each at pairs of doors. Not required on doors having weather seals.

N. Weatherstrip Smoke Seals:
1. Weatherstrip shall be Pemko 303AS.
2. Door Bottoms shall be Pemko 216AV.
3. Smoke Seal shall be Pemko S88D.
4. Meeting Stiles shall be Pemko 303AS

O. Thresholds:
Shall be Pemko Type 170A sized for opening and meeting handicapped conditions.

2.03 KEYING

A. Provide keyed brass construction cores and keys during the construction period. Construction control and operating keys and core shall not be part of the Owner's permanent keying system or furnished in the same keyway (or key section) as the Owner's permanent keying system. Permanent cores and keys (prepared according to the accepted keying schedule) will be furnished to the Owner.

B. Cylinders, removable and interchangeable core system: Best CorMax Patented 7-pin.

C. Permanent keys and cores: Stamped with the applicable key mark for identification. These visual key control marks or codes will not include the actual key cuts. Permanent keys will also be stamped "Do Not Duplicate."

D. Transmit Grand Masterkeys, Masterkeys and other Security keys to Owner by Registered Mail, return receipt requested.

E. Furnish keys in the following quantities:

1 each Grand Masterkeys
4 each Masterkeys
2 each Change keys each keyed core

15 each Construction masterkeys
2 each Control keys

PART 3EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine conditions under which finish hardware will be installed. Report deficiencies to the Architect.

3.02 INSTALLATION

Mount hardware units at heights as recommended per SDI-100, except as specifically indicated or required to comply with governing regulations, and except as may be otherwise directed by Architect.

Application of Hardware: All hardware shall be installed in a neat, workmanlike manner following the manufacturer's instructions. Fasteners, supplied with the hardware, shall be used to secure the hardware in place. Wood screws shall be used for securing hardware to wood surfaces. Machine screws, set in expansion shields, shall be used for securing hardware to concrete or masonry surfaces. Thru-bolts shall be used where specified or where necessary for satisfactory installation. After application, hardware shall be protected from paint, stains, blemishes and damage until acceptance of the Work. After hardware is checked, keys shall be tagged, identified and delivered to the Owner by registered mail, or delivered in person after receiving a signed receipt from a responsible representative of the Owner. Any errors in cutting or fitting, or any damage to adjoining work shall be repaired, as directed.

Install each hardware item in compliance with the manufacturer's instructions and recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished in another way, coordinate removal, storage and reinstallation or application of surface protections with finishing work specified in the Division-9 sections. Do not install surface-mounted items until finishes have been completed on the substrate. All material shall be installed by experienced workmen. Contractor shall be responsible for correct application according to factory installation instructions.

Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry.

Adjust and Clean: Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for application made.

Insure that after installation, all the materials furnished and installed under this Section, will be free of any paint or lacquer as may appear from the Work of other subcontractors.

Final Adjustment: Wherever hardware installation is made more than one month prior to acceptance or occupancy of a space or area, return to the work during the week prior to acceptance or occupancy, and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to compensate for final operation of heating and ventilating equipment. Instruct Owner's personnel in proper adjustment and maintenance of hardware and hardware finishes, during the final adjustment of hardware.

3.03 CLEANING

A. During the course of the Work and on completion, remove and dispose of excess materials, equipment and debris away from premises. Leave Work in clean condition in accordance with Section 01500.

3.04 HARDWARE SCHEDULE

See the Construction Drawings.

While the hardware sets are intended to cover all doors and establish a type and standard of quality, it shall be the specific duty and responsibility of the hardware supplier to examine the plans and specifications and furnish proper hardware for all openings. ***The hardware supplier shall review the entire specification and drawings versus the door schedule and notify the Architect of any errors, inconsistencies or omissions during the bid period.***

END OF SECTION

SECTION 088000

GLAZING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes glazing for the following locations, including those specified in other Sections where glazing requirements are specified by reference to this Section:

1. Lights in doors and interior and exterior framing.

B. Types of glazing materials include:

1. 1" insulated units with clear glazing and low-E coating for exterior window openings
2. ¼" clear safety glazing (tempered) for exterior doors and clear tempered for interior openings.
3. ¼" nominal laminated glass with colored interlayer for exterior openings.

C. Hollow metal doors and frames are specified in Section 081113.

D. Section 081416 – Wood Doors.

1.3 DEFINITIONS

A. Deterioration of Insulating Glass: Failure of hermetic seal under normal use due to causes other than glass breakage and improper practices for maintaining and cleaning insulating glass. Evidence of failure is the obstruction of vision by dust, condensation within the unit, or discoloration.

1.4 SUBMITTALS

A. General: Submit product data for each glass product and glazing material indicated.

B. Product certificates signed by glazing materials manufacturers certifying that their products comply with specification requirements.

1.5 QUALITY ASSURANCE

A. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, except where more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.

1. FGMA Publications: "FGMA Glazing Manual."

B. Safety Glass: Products complying with ANSI Z97.1 and testing requirements of 16 CFR Part 1201 for Category II materials.

1. Subject to compliance with requirements, provide safety glass permanently marked with certification label of Safety Glazing Certification Council (SGCC) or other certification agency acceptable to authorities having jurisdiction.

2. Glaze openings with safety glass as required by local codes and as shown on the drawings.

C. Insulating Glass Certification Program: Provide insulating glass units permanently marked on either spacers or at least one component lite of units with appropriate certification label of inspecting and testing agency - Insulating Glass Certification Council.

1.6 WARRANTY

A. General: Warranties specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under requirements of the Contract Documents.

B. Manufacturer's Warranty on Insulating Glass: Submit written warranty signed by manufacturer agreeing to furnish replacements for those insulating glass units that deteriorate, within 10 years after substantial completion.

Warranty covers only deterioration due to normal conditions of use and not to handling, installing, and cleaning practices contrary to glass manufacturer's published instructions.

PART 2 - PRODUCTS

2.1 FLOAT GLASS

A. ASTM C 1048, Type I, thickness 1/4".

TINT: Clear at doors, clear for interior

Safety Glazing: As needed for indicated locations – see drawings. Safety glazing shall be fully tempered ¼” clear float glass.

USE: Typical interior openings, lights in interior and exterior doors

B. Laminated Glass: Two lights of 1/8" thickness clear glass, with .030" colored interlayer, assembled under heat and pressure.

Interlayer: As selected from full range of Vanceva polyvinyl butyral film colors.

USE: Exterior openings as noted.

2.2 INSULATING GLASS PRODUCTS

A. Insulating Glass Units: Preassembled units consisting of organically sealed lights of glass separated by a dehydrated air space complying with ASTM E 774 and with other requirements indicated for a total thickness of 1. Lite surface No. 2 (inside of exterior light) shall have a low-E coating.

Clear glass, ¼" outside light with OldcastleBE Sunglass Low-E No. 2
½" airspace
¼" clear inside light

SHGC:	0.25
Shading Coefficient:	0.29
Summer U:	0.27
Vis. Light:	50%
UV Transmission:	4%
Light to Solar Gain:	2.00

Temper lites as needed for safety glazing applications. Spacer shall be manufacturer's standard color. Provide a dual seal of primary and secondary sealants, manufacturer's standards.

2.3 GLAZING SEALANT: Comply with sealant and glass manufacturers for selection of glass sealants which suit project application and installation conditions and which are compatible with surfaces contacted. Provide color of exposed sealants is selected by Architect.

A. 1-Part Non-Acid-Curing Silicone Glazing Sealant: ASTM C 920; Type S; Grade NS; Class 25; Uses NT, G, A, and, as applicable to uses indicated, O; low modulus with additional capability to withstand an increase or decrease in joint width of 50 percent of joint width and a tensile strength of 45 psi or less per ASTM D 412 at 100 percent elongation after 14 days at 77 deg. F (25 deg. C).

B. Cleaners, Primers and Sealers: Type recommended by manufacturer of sealants.

C. Blocks and Spacers: Neoprene, EPDM or silicone as required for compatibility with glazing sealants; of 80 to 90 Shore A hardness for setting blocks and, for spacers and edge blocks, of hardness recommended by glass and sealant manufacturer for application indicated.

D. Compressible Filler Rods: Closed-cell or waterproof-jacketed rod stock of synthetic rubber or plastic foam, 5-10 psi compression strength for 25 percent compression.

2.4 GLAZING TAPES

A. Back-Bedding Mastic Glazing Tape: Preformed, butyl-based elastomeric tape with a solids content of 100 percent, nonstaining and nonmigrating in contact with nonporous surfaces, with or without spacer rod as recommended by tape and glass manufacturers for application indicated, packaged on rolls with a release paper backing, and complying with AAMA 800.

2.5 FABRICATION OF GLASS AND OTHER GLAZING PRODUCTS: Fabricate glass and other glazing products in sizes required to glaze openings indicated for Project, with edge and face clearances, edge and surface conditions, and bite complying with recommendations of product manufacturer and referenced glazing standard as required to comply with system performance requirements.

PART 3 - EXECUTION

3.1 PREPARATION: Clean glazing channels and other framing members receiving glass immediately before glazing. Remove coatings that are not firmly bonded to substrates.

3.2 GLAZING, GENERAL

A. Comply with combined recommendations of manufacturers of glass, sealants, gaskets, and other glazing materials, except where more stringent requirements are indicated, including those in referenced glazing publications. All openings shall be glazed air- and watertight using the most appropriate method.

1. Comply with aluminum manufacturer's recommendations and use standard elastomeric extrusions for glazing aluminum storefront framing.

B. Glazing channel dimensions as indicated on Drawings provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances. Adjust as required by Project conditions during installation.

C. Protect glass and infill panels from edge damage during handling and installation. Protect finish on infill panels from damage. Remove plastic film from infill panels.

D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction sealant-substrate testing.

E. Install elastomeric setting blocks in sill rabbets, sized and located to comply with referenced glazing standard, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.

F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.

G. Provide spacers for glass sizes larger than 50 united inches (length plus height) as follows:

1. Locate spacers inside, outside, and directly opposite each other. Install correct size and

spacing to preserve required face clearances, except where gaskets and glazing tapes are used that have demonstrated ability to maintain required face clearances and comply with system performance requirements.

2. Provide 1/8-inch minimum bite of spacers on glass and use thickness equal to sealant width. With glazing tape, use thickness slightly less than final compressed thickness of tape.

H. Provide edge blocking to comply with requirements of referenced glazing publications, unless otherwise required by glass manufacturer.

I. Set glass lites in each series with uniform pattern, draw, bow, and similar characteristics. Set low-E units with correct side to exterior as indicated on each unit.

J. Where wedge-shaped gaskets are driven into one side of channel to pressurize sealant or gasket on opposite side, provide adequate anchorage so gasket cannot walk out when installation is subjected to movement.

K. Square cut wedge-shaped gaskets at corners and install gaskets in manner recommended by gasket manufacturer to prevent corners from pulling away; seal corner joints and butt joints with sealant recommended by gasket manufacturer.

3.3 TAPE GLAZING

A. Position tapes on fixed stops so that when compressed by glass their exposed edges are flush with or protrude slightly above sightline of stops.

B. Install tapes continuously but not in one continuous length. Do not stretch tapes to make them fit opening.

C. Where framing joints are vertical, cover these joints by applying tapes to heads and sills first and then to jambs. Where framing joints are horizontal, cover these joints by applying tapes to jambs and then to heads and sills.

D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.

E. Do not remove release paper from tape until just before each lite is installed.

F. Apply heel bead of elastomeric sealant.

G. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.

H. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.4 SEALANT GLAZING (WET)

A. Install continuous spacers between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel
weep systems until sealants cure. Secure spacers in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.

B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.

C. Tool exposed surfaces of sealants to provide a substantial wash away from glass. Install pressurized gaskets to protrude slightly out of channel to eliminate dirt and moisture pockets.

3.5 PROTECTION AND CLEANING

A. Protect glass from contact with contaminating substances resulting from construction operations including weld splatter. If, despite such protection, contaminating substances do come into contact with glass, remove them immediately as recommended by glass manufacturer.

B. Remove and replace glass that is broken, chipped, cracked, abraded, or damaged in any way, including natural causes, accidents and vandalism, during construction period.

C. Clean glass or panels on both faces in each area of Project prior to date scheduled for inspections that establish date of Substantial Completion.

END OF SECTION 088000

SECTION 092226

SUSPENDED METAL FURRING

PART 1 GENERAL

1.01 WORK SPECIFIED HEREIN

All labor, material, equipment and services necessary to furnish and install all items as indicated or specified.

1.02 PROJECT CONDITIONS

Where metal furring is a component of an assembly for which a fire resistive rating is shown or required, provide components complying with UL design assemblies shown.

PART 2 PRODUCTS

2.01 MATERIALS

A. Metal furring shall comply with applicable requirements of ASTM C841 as applicable.

B. Furring channels shall be hot or cold-rolled type with minimum weights per 1000 lineal feet as follows:

Size (Depth)	Hot Rolled	Cold Rolled
3/4"	300	300
1"	410	- - -
1 1/2"	1120	475
2"	1260	590

C. Weight does not include weight of protective finishes.

D. Pencil rods shall be hot-rolled steel, round, not less than 3/16" diameter.

E. Hangers shall be wire, rod or rigid steel of type and size required to comply with ANSI A42.4 for maximum ceiling areas to be supported.

F. Tie wire shall be double annealed and galvanized conforming to type I, FS QQ-W-461, gauges as specified.

G. Clips shall be galvanized steel wire or sheet metal devices designed for attachment of furring members to supports or to each other.

H. Furring brackets shall be one piece metal assembly with anchor plate and adjustable serrated bracket arm, fabricated from 20 gauge galvanized steel.

I. All component's unless specified as galvanized, shall have manufacturer's standard rust-inhibitive shop paint.

J. Contractor's Option: USG Interior's Rigid X Drywall Suspension System or approved equal. Materials must comply with ASTM C635 and must be installed according to ASTM C636.

PART 3 EXECUTION

3.01 INSTALLATION

A. Except where otherwise indicated, provide 1 1/2" main runner channels spaced 42" o.c. and 3/4" furring channels spaced not over 16" o.c. Neither main runners nor cross furring shall be let into nor come in contact with abutting masonry or reinforced concrete walls or partitions. Locate a main runner within 6" of the wall to support the ends of the cross furring, and locate hangers to support the ends of the main runners.

B. When main runners are splice, overlap the ends not less than 12" and securely tie near each end of the splice with 2 loops of 16 gauge tie wire.

C. Securely saddle-tie cross furring to the main runners using not less than 16 gauge tie wire at each crossing, or by using not less than 16 gauge tie wire at each crossing, or by using 9 gauge wire hairpin clips or equivalent clips or attachments. When furring members are spliced, overlap ends not less than 8" and securely tie near each end of the splice with two (2) loops of 16 gauge tie wire.

D. At lights or other openings that interrupt the main runner or furring channels reinforce grillage with 3/4" cold-rolled channels, wire tied atop and parallel to the main runner channels.

E. For steel beams, Joist or other steel construction wrap hangers around, insert through, clip or bolt to the supports, so as to develop the full strength of the hangers.

F. In seismic zones, provide supplemental fasteners as required by governing codes and authorities.

G.. Do not support suspension system from steel or wood deck. System shall be supported from structural joists or beam members. If spans between structural members exceeds recommended support distances, provide secondary members, supported from structural members, sized and numerous as required to provide the necessary hanger spacing.

H. Locate hangers plumb in relation to main runners and to avoid contact with insulation covering ducts and pipes. Do not pass hangers through ducts. Alter spacing of hangers or splay hangers to avoid ducts and other obstructions, but do not exceed maximum allowable ceiling areas to be supported by each hanger. Offset horizontal forces or splayed hangers by counter-splaying, bracing or other suitable means.

I. Provide extra hangers within 6" of ends of main runners and as required to support light fixtures, ceiling diffuses and grilles, access panels and other items resting in or on the ceilings. At control or expansion joints, provide extra hangers as required to support discontinuous runners.

END OF SECTION

SECTION 092900

GYPSUM BOARD

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Supply and installation of gypsum board, joint treatment, metal reveals and expansion joints as shown on the Drawings and as specified. Gypsum board roofing substrate not included in this Section.

1.02 QUALITY ASSURANCE

A. Applicator Qualifications: Company specializing in Gypsum Board Systems Work with 2 years documented experience and approved by Manufacturer.

B. Comply with applicable specification recommendations of GA-216 and GA-600 as published by the Gypsum Association.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Furnish products of one of the following Manufacturers, except as approved by the Architect, subject to compliance with Specification requirements:
1. Domtar Gypsum of Domtar Inc.
2. Georgia-Pacific Corp.
3. Gold Bond Building Products Div., National Gypsum Co.
4. United States Gypsum Co.

2.02 GYPSUM BOARD MATERIALS

A. Standard Gypsum Board (interior): ANSI/ASTM C36; 5/8 inch thick, maximum permissible length; ends square cut, tapered edges.

B. Moisture Resistant Gypsum Board: ANSI/ASTM C630; 5/8 inch thick, maximum permissible length; ends square cut.

C. Backer Board: Dens-Shield as manufactured by Georgia-Pacific or approved equal.

D. Exterior Gypsum Board Substrate: Dens-Glass Gold, 5/8" complying with ASTM C 1177 for exterior substrate.

2.03 ACCESSORIES

A. Adhesive: ASTM C557.

B. Corner Beads: GA216; Type CB; square electro-galvanized steel

C. Edge Trim: GA216; Type L bead; electro-galvanized steel and Type LC rolled-formed zinc.

D. Control Joint: U.S. Gypsum No. 093, roll-formed zinc.

E. Joint Materials: ANSI/ASTM C475; reinforcing tape, joint compound, adhesive, water, and fasteners. For coated board and gypsum sheathing, use material recommended by Board Manufacturer.

F. Screws: ASTM C1002 for steel drill screws. Type G for fastening to gypsum board, Type S for fastening to light gauge steel framing.

G. Wall Texture: As manufactured by USG or LaHabra Inc., multi-purpose, pre-packaged, non-asbestos type.

PART 3 EXECUTION

3.01 INSPECTION

A. Verify that site conditions are ready to receive Work. Verify wall framing is straight and plumb and that all framing members and backing for gypsum board installation are installed.

B. Verify with General Contractor that all backing and blocking is installed for fixtures.

3.02 GYPSUM BOARD INSTALLATION

A. Install gypsum board in accordance with GA-201 and GA-216, and Manufacturer's instructions as applicable using required gypsum board type.

B. Erect single layer standard gypsum board in most economical direction, with ends and edges occurring over firm bearing.

C. Install Backer Board at locations to receive ceramic tile. Install moisture resistant board at all other wet locations.

D. Use screws 8' o.c. perimeter and 12' o.c. field when fastening gypsum board to metal and wood furring or framing.

E. Place corner beads at external corners screwing at maximum 12" o.c. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.

3.03 JOINT TREATMENT

A. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.

B. Feather coats onto adjoining surfaces so that camber is maximum 1/32 inch.

C. Taping, filling, and sanding is not required at surfaces behind ceramic tile or exterior substrate locations

3.04 FINISHING OF GYPSUM BOARD SURFACES

A. Provide finish of gypsum board surfaces in accordance with the Gypsum Association Recommended Specification:

1. Joints and interior angles shall have tape embedded in joint compound and 3 separate coats of joint compound applied over joints, angles, fastener heads, and accessories.
2. Feather joint compound at all taped joints as to make undetectable.
3. The surface shall be smooth and free of tool marks and ridges.
4. Surface to be coated with primer sealer as specified in Section 09900 prior to application of final finishes.

B. Surfaces shall be free of dust, dirt and oil before application of texture or skim coat.

C. Wallboard shall receive smooth mission finish.

D. Remove over-spray from adjoining construction.

3.06 CLEANING

A. After completion of wallboard installation, taping and texturing, remove rubbish, excess material and equipment from building and job site, leaving floors and other surfaces clean.

B. During the course of the Work and on completion of the Work, remove excess materials, equipment and debris and dispose of away from premises. Leave Work in clean condition in accordance with Section 01500.

3.07 PROTECTION

A. Protect Work from damage until acceptance.
1. Maintain temperature of installed gypsum board spaces in range of 55 degrees F. (13 degrees C.) to 90 degrees F. (32 degrees C.) until building is entirely closed.
2. Ventilate as required to eliminate excessive moisture.

B. Repair or replace damaged Work.

END OF SECTION

SECTION 095133

ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes acoustical panel ceilings as follows:

1) 2 x 4 and 2 x 2 panels in two types, mineral fiber, suspended

2) 15/16” wide steel suspension grid.

1.3 RELATED WORK:

A. Drywall ceilings are specified in Section 092900.

1.4 SUBMITTALS: Submit product data for each type of product specified. Submit samples of each type of panel. Submit color samples for clouds.

1.5 COORDINATION OF WORK: Coordinate layout and installation of acoustical ceiling units and suspension system components with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system components, and partition system.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver acoustical ceiling units to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.

B. Before installing acoustical ceiling units, permit them to reach room temperature and a stabilized moisture content. Handle acoustical ceiling units carefully to avoid chipping edges or damaging units in any way.

1.7 EXTRA MATERIALS

A. Deliver extra materials to Owner. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with appropriate labels.

1. Lay-in Acoustical Ceiling Units: Furnish 1 box of ceiling panels installed.

1.8 QUALITY ASSURANCE

A. Fire-Test-Response Characteristics: Provide acoustical panel ceilings that comply with the following requirements:

1. Fire-Resistance Characteristics: Where indicated, provide acoustical panel ceilings identical to those of assemblies tested for fire resistance per ASTM E 119 by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.

    1. Fire-Resistance Ratings: Indicated by design designations from UL's "Fire Resistance Directory" or from the listings of another testing and inspecting agency.
    2. Identify materials with appropriate markings of applicable testing and inspecting agency.

2. Surface-Burning Characteristics: Provide acoustical panels with the following surface-burning characteristics complying with ASTM E 1264 for Class A materials as determined by testing identical products per ASTM E 84:

B. Seismic Bracing: Install all ceilings and suspension systems in accordance with ASTM E580 – Standard Practice for Installation of Ceiling Suspension Systems in Areas Subject to Earthquake Ground Movement.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. *ACT-1* - Mineral Base Panels, smooth texture with perforations, non-directional finish, square edge treatment. Storage and similar spaces.

1. Minimum Performance Values
    NRC .55
    CAC 35
    Light reflectance: Minimum 0.82.
    VOC Formaldehyde – No added
    Moisture Resistance –Antimicrobial
    30 year limited warranty against sag, mold/mildew, bacterial growth

2. Size: 24" x 48” and 24" x 24" as shown on plans
3. Thickness: 5/8”

    a) Armstrong Cortega 769
    b) USG Olympia Radar Basic 2310

B. *ACT-2* - Mineral Base Panels, smooth vinyl-faced membrane, non-perforated, square edge treatment. Scrubbable, water repellent. Kitchen and associated spaces.

1. Minimum Performance Values
    NRC – N/A
    CAC 40
    Light reflectance: Minimum 0.80.
    VOC Formaldehyde – No added
    Moisture Resistance –Antimicrobial

2. Size: 24" x 48” and 24" x 24" as shown on plans
3. Thickness: 5/8”

    a) Armstrong Clean Room VL Unperforated 870

2.2 METAL SUSPENSION SYSTEMS, GENERAL

A. Standard for Metal Suspension System: Provide 15/16" wide metal suspension for 2'x4' or 2'x2' panels that complies with applicable ASTM C 635 requirements.

B. Finish and Color: Provide manufacturer's factory-applied paint finish – white.

C. Attachment Devices: Size for 5 times design load indicated in ASTM C 635, Table 1, Direct Hung unless otherwise indicated.

D. Edge Moldings and Trim

1. Angle (L) moldings for all areas.

2.3 DIRECT-HUNG SUSPENSION SYSTEMS

A. Standard-Face Double-Web Steel Capped Suspension System: Main and cross-runners roll-formed from prepainted or electrolytic zinc-coated cold-rolled steel sheet; 15/16" wide face; Intermediate-Duty System; Cap: steel, painted white.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine structure to which ceiling systems attach to make sure all is ready to receive suspension systems. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Furnish layouts for preset inserts, clips, and other ceiling anchors whose installation is specified in other sections.

B. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less-than-half-width units at borders.

C. Coordinate for above ceiling work that could damage installed panels.

3.3 INSTALLATION

A. General: Install acoustical ceiling systems to comply with installation standard referenced below, per manufacturer's instructions and CISCA "Ceiling Systems Handbook."

1. Standards for Installation of Ceiling Suspension Systems: Comply with ASTM C 636 and ASTM E 580.

B. Suspend ceiling hangers directly or indirectly from building structural members and as follows:

1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.

2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers at spacings required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
3. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eyescrews, or other devices that are secure and appropriate for substrate, and in a manner that will not cause them to deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
4. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eyescrews, or other devices that are secure and appropriate for structure to which hangers are attached as well as for type of hanger involved, and in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.
5. Space hangers not more than 4'-0" o.c. along each member supported directly from hangers, unless otherwise shown, and provide hangers not more than 8 inches from ends of each member.
6. Connect wires or other supports to structure.
7. Secure bracing wires to ceiling suspension members and to supports with a minimum of four tight turns. Suspend bracing from building's structural members as required for hangers, without attaching to permanent metal forms, steel deck, or steel deck tabs. Fasten bracing wires into concrete with cast-in-place or postinstalled anchors.

C. Install edge moldings at perimeters of acoustical ceiling areas, at terminations (such as building columns), and where necessary to conceal edges of acoustical units.

1. Screw-attach moldings to substrate at intervals not over 16 inches o.c. and not more than 3 inches from ends, leveling with ceiling suspension system to tolerance of 1/8 inch in 12'-0". Miter corners accurately and connect securely.

D. Install acoustical panels in coordination with suspension system, with edges concealed by support of suspension members. Scribe and cut panels to fit accurately at borders and at penetrations.

1. Handle all panels carefully to avoid chipping edges. Take care with clouds to not damage painted finish.

2. Coordinate with other forces who may be performing work at the site (such as pulling cable) to protect panels from damage.

3.4 CLEANING

A. Clean exposed surfaces of acoustical ceilings, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch-up of minor finish damage. Remove chipped or dented panels and replace at completion of work.

END OF SECTION 095133

SECTION 09 65 16

Resilient Flooring – Vinyl Sheet Flooring

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Flooring and accessories as shown on the drawings and schedules and as indicated by the requirements of this section.
B. Related Documents
   1. Drawings and General Provisions of the Contract (including General and Supplementary Conditions and Division 1 sections) apply to the work of this section.
C. Related Sections:
   1. Other Division 9 sections for floor finishes related to this section but not the work of this section
   2. Division 3 Concrete; not the work of this section
   3. Division 6 Wood and Plastics; not the work of this section
   4. Division 7 Thermal and Moisture Protection; not the work of this section

1.02 REFERENCES

A. Armstrong Flooring Technical Manuals
   1. Armstrong Flooring Guaranteed Installation Systems manual, F-5061
B. ASTM International:
   1. ASTM E 648 Standard Test Method for Critical Radiant Flux of Floor-Covering Systems Using a Radiant Heat Energy Source
   2. ASTM E 662 Standard Test Method for Specific Optical Density of Smoke Generated by Solid Materials
   3. ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring
   4. ASTM F 1482, Standard Guide to Wood Underlayment Products Available for Use Under Resilient Flooring
   5. ASTM F 1861 Standard Specification for Resilient Wall Base
   6. ASTM F 1869 Standard Test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride
   7. ASTM F 1913 Standard Specification for Vinyl Sheet Floor Covering Without Backing
   8. ASTM F 2170 Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using in situ Probes
C. National Fire Protection Association (NFPA):
   1. NFPA 253 Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
   2. NFPA 258 Standard Test Method for Measuring the Smoke Generated by Solid Materials
D. Standards Council of Canada
   1. CAN/ULC-S102.2 Standard Test Method for Surface Burning Characteristics of Flooring, Floor Covering and Miscellaneous Materials and Assemblies

1.03 SYSTEM DESCRIPTION

A. Performance Requirements: Provide flooring which has been manufactured, fabricated and installed to performance criteria certified by manufacturer without defects, damage, or failure.
B. Administrative Requirements

1. Pre-installation Meeting: Conduct an on-site pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements. Comply with Division 1 Project Management and Coordination (Project Meetings) Section.
2. Pre-installation Testing: Conduct pre-installation testing as follows: [Specify testing (i.e. moisture tests, bond test, pH test, etc)

C. Sequencing and Scheduling
1. Install flooring and accessories after the other finishing operations, including painting, have been completed. Close spaces to traffic during the installation of the flooring.
2. Do not install flooring over concrete slabs until they are sufficiently dry to achieve a bond with the adhesive, in accordance with the manufacturer's recommended bond, moisture tests and pH test.

1.04 SUBMITTALS

A. Submit shop drawings, seaming plan, coving details, and manufacturer's technical data, installation and maintenance instructions (latest edition of Armstrong Flooring Guaranteed Installation Systems manual, F-5061.) for flooring and accessories.

B. Submit the manufacturer's standard samples showing the required colors for flooring, welding rods, and applicable accessories.

C. Submit Safety Data Sheets (SDS) available for adhesives, weld rod, moisture mitigation systems, primers, patching/leveling compounds, floor finishes (polishes) and cleaning agents and Material Information Sheets for flooring products.

D. If required, submit the manufacturer's certification that the flooring has been tested by an independent laboratory and complies with the required fire tests.

E. Closeout Submittals: Submit the following:

1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.

2. Warranty: Warranty documents specified herein

1.05 QUALITY ASSURANCE

A. Single-Source Responsibility: provide types of flooring and accessories supplied by one manufacturer, including moisture mitigation systems, primers, leveling and patching compounds, and adhesives.

B. Select an installer who is experienced and competent in the installation of resilient sheet flooring using heat-welded seams and the use of Armstrong Flooring subfloor preparation products.

1. Engage installers certified as Armstrong Commercial Flooring Certified Installers

2. Confirm installer's certification by requesting their credentials

C. Fire Performance Characteristics: Provide resilient vinyl sheet flooring with the following fire performance characteristics as determined by testing material in accordance with ASTM test methods indicated below by a certified testing laboratory or other testing agency acceptable to authorities having jurisdiction:

1. ASTM E 648 Critical Radiant Flux of 0.45 watts per sq. cm. or greater, Class I

2. ASTM E 662 (Smoke Generation) Maximum Specific Optical Density of 450 or less

3. CAN/ULC-S102.2 – Flame Spread Rating and Smoke Developed – Results as tested

1.06 DELIVERY, STORAGE, AND HANDLING

A. Comply with Division 1 Product Requirements Sections

B. Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.

C. Deliver materials in good condition to the jobsite in the manufacturer's original unopened containers that bear the name and brand of the manufacturer, project identification, and shipping and handling instructions.

D. Store materials in a clean, dry, enclosed space off the ground, protected from harmful weather conditions and at temperature and humidity conditions recommended by the manufacturer. Protect adhesives from freezing. Store flooring, adhesives and accessories in the spaces where they will be installed for at least 48 hours before beginning installation.

1.07 PROJECT CONDITIONS

A. Maintain a minimum temperature in the spaces to receive the flooring and accessories of 65ºF (18ºC) and a maximum temperature of [100ºF (38ºC)][85ºF (29ºC)] for at least 48 hours before, during, and for not less than 48 hours after installation. Thereafter, maintain a minimum temperature of 55ºF (13ºC) in areas where work is completed. Protect all materials from the direct flow of heat from hot-air registers, radiators, or other heating fixtures and appliances. Refer to the Armstrong Flooring Guaranteed Installations Systems manual, F-5061 for a complete guide on project conditions.

1.08 LIMITED WARRANTY

A. Resilient Flooring: Submit a written warranty executed by the manufacturer, agreeing to repair or replace resilient flooring that fails within the warranty period.

B. Limited Warranty Period: 5 years

C. The Limited Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

D. For the Limited Warranty to be valid, this product is required to be installed using the appropriate Armstrong Flooring Guaranteed Installation System. Product installed not using the specific instructions from the Guaranteed Installation System will void the warranty.

1.09 EXTENDED SYSTEM LIMITED WARRANTY

A. Resilient Flooring System: Submit a written warranty executed by the manufacturer, agreeing to repair or replace system (subfloor preparation products, adhesive, and floor covering) that fails within the warranty period.

B. Limited Warranty Period: 10 years on top of the Resilient Flooring Limited Warranty

C. [S-453 Level Strong™ cement based self-leveling compound] [S-456 Patch Strong™ flexible patching and smoothing compound] [S-454 Prime Strong™ acrylic primer for porous substrates] [S-455 Prime Strong™ acrylic primer for non-porous substrates] [S-452 Seal Strong™ two part moisture mitigation system]

D. The installation of an Armstrong Flooring product along with the recommended Armstrong Flooring adhesive, as well as any one of the Strong System subfloor preparation products

listed above, provides 10 additional years of limited warranty coverage. The Strong System limited warranty covers the installation integrity for the length of the flooring product warranty plus 10 years. In order to qualify for the Strong System Warranty, any subfloor preparation product needed for an installation must be an Armstrong Flooring product.

E. For the System Limited Warranty to be valid, this product is required to be installed using the appropriate Armstrong Flooring Guaranteed Installation System. Product installed not using the specific instructions from the Guaranteed Installation System will void the warranty.

F. When Armstrong Flooring Strong System subfloor preparation products are used with other manufacturers' floor coverings, adhesives, or other subfloor preparation products, Armstrong Flooring warrants our products to be free from manufacturing defects from the date of purchase through the limited warranty period of 15 years.

1.10 MAINTENANCE

A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials from same production run as products installed. Packaged with protective covering for storage and identified with appropriate labels.

1. Quantity: Furnish quantity of flooring units equal to 115% of amount installed with the additional 15% provided to the owner for stock.
2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra material.

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. Resilient sheet flooring, wall base, adhesives and subfloor preparation products and accessories::

1. Armstrong Flooring Inc., 2500 Columbia Avenue, Lancaster, PA 17603, www.armstrongflooring.com/commercial
2. Manufacturer must have a headquarters in the United States of America

2.02 RESILIENT SHEET FLOORING MATERIALS

A. Provide Accolade Plus Homogeneous Sheet Vinyl Flooring or equal:

1. Description: An unbacked, nonlayered, homogeneous sheet vinyl flooring. Protected by a UV-cured polyurethane finish, the colors and pattern detail are dispersed uniformly throughout the thickness of the product. Color pigments are insoluble in water and resistant to cleaning agents and light.
2. Homogeneous sheet flooring shall conform to the requirements of ASTM F1913 Standard Specification for Vinyl Sheet Floor Covering Without Backing
3. Pattern and Color: in [%COLOR%][color selected from the range currently available from Armstrong Flooring Inc.]
4. Width: 6 ft. (1.83 m).
5. Length: up to 65.6 lineal feet (20 meters)
6. Thickness: 0.080 in. (2.0 mm)
7. Wear layer thickness: 0.080 in. (2.0 mm)

B. Vinyl Weld Rod:

1. [Provide solid color vinyl weld rod as produced by Armstrong Flooring, and intended for heat welding of seams. Color shall be compatible with field color of flooring or as selected by Architect to contrast with field color of flooring. Color selected from the range currently available from Armstrong Flooring.]

1.

C. Seam Adhesive:

1. [Provide Armstrong Flooring S-761 Seam Adhesive at seams as recommended by the resilient flooring manufacturer.]

2.03 PRODUCT SUBSTITUTION

A. Substitutions: No substitutions other than pre-approved equals permitted because of the specific attributes listed in Section 2.02.

2.04 WALL BASE MATERIALS

A. For integral flash cove base: Provide integral flash cove wall base by extending sheet flooring 6 in. (15.24 cm) up the wall using adhesive, welding rod, and accessories recommended and approved by the flooring manufacturer.

2.05 ADHESIVES

A. Provide Armstrong [S-599 Vinyl Sheet Flooring Adhesive Premium Commercial adhesive for field areas and Armstrong [S-580 Flash Cove Adhesive at flash coving][S-725 Wall Base Adhesive at the wall base] as recommended by the flooring manufacturer.

2.06 ACCESSORIES

A. For patching, smoothing, and leveling monolithic subfloors (concrete, terrazzo, quarry tile, ceramic tile, and certain metals), provide Armstrong S-184 Fast-Setting Cement-Based Patch and Underlayment

B. For sealing joints between the top of wall base or integral cove cap and irregular wall surfaces such as masonry, provide plastic filler applied according to the manufacturer's recommendations.

C. Provide top edge trim caps of anodized aluminum for integral flash cove.

D. Provide a fillet support strip for integral cove base with a minimum radius of 1 in. (2.54 cm) of wood or plastic.

E. Provide transition/reducing strips tapered to meet abutting materials.

F. Provide threshold of thickness and width as shown on the drawings.

G. Provide resilient edge strips of width shown on the drawings, of equal gauge to the flooring, homogeneous vinyl or rubber composition, tapered or bullnose edge, with color to match or contrast with the flooring, or as selected by the Architect from standard colors available.

H. Provide metal edge strips of width shown on the drawings and of required thickness to protect exposed edges of the flooring. Provide units of maximum available length to minimize the number of joints. Use butt-type metal edge strips for concealed anchorage, or overlap-type metal edge strips for exposed anchorage. Unless otherwise shown, provide strips made of extruded aluminum with a mill finish.

PART 3 - EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's product data, including technical bulletins, product catalog, installation instructions, and product carton instructions for installation and maintenance procedures as needed.

3.02 EXAMINATION

A. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions (i.e. moisture tests, bond test, pH test, etc.).

B. Visually inspect flooring materials, adhesives and accessories prior to installation. Flooring material with visual defects shall not be installed and shall not be considered as a legitimate claim.

C. Examine subfloors prior to installation to determine that surfaces are smooth and free from cracks, holes, ridges, and other defects that might prevent adhesive bond or impair durability or appearance of the flooring material.

D. Inspect subfloors prior to installation to determine that surfaces are free from curing, sealing, parting and hardening compounds; residual adhesives; adhesive removers; and other foreign materials that might prevent adhesive bond. Visually inspect for evidence of moisture, alkaline salts, carbonation, dusting, mold, or mildew.

E. Report conditions contrary to contract requirements that would prevent a proper installation. Do not proceed with the installation until unsatisfactory conditions have been corrected.

F. Failure to call attention to defects or imperfections will be construed as acceptance and approval of the subfloor. Installation indicates acceptance of substrates with regard to conditions existing at the time of installation.

3.03 PREPARATION

A. Subfloor Preparation: Smooth concrete surfaces, removing rough areas, projections, ridges, and bumps, and filling low spots, control or construction joints, and other defects with Armstrong Flooring S-184 Fast-Setting Cement-Based Patch and Underlayment as recommended by the flooring manufacturer. Refer to Armstrong Flooring Guaranteed Installation Systems manual, F-5061 and ASTM F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring for additional information on subfloor preparation.

B. Subfloor Cleaning: The surface shall be free of dust, solvents, varnish, paint, wax, oil, grease, sealers, release agents, curing compounds, residual adhesive, adhesive removers and other foreign materials that might affect the adhesion of resilient flooring to the concrete or cause a discoloration of the flooring from below. Remove residual adhesives as recommended by the flooring manufacturer. Remove curing and hardening compounds not compatible with the adhesives used, as indicated by a bond test or by the compound manufacturer's recommendations for flooring. Avoid organic solvents. Spray paints, permanent markers and other indelible ink markers must not be used to write on the back of the flooring material or used to mark the concrete slab as they could bleed through, telegraphing up to the surface and permanently staining the flooring material. If these contaminants are present on the substrate they must be mechanically removed prior to the installation of the flooring material. Refer to the Armstrong Flooring Guaranteed Installation Systems manual, F-5061 and ASTM

F 710 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring for additional information on subfloor preparation.

C. [When using S-599 Adhesive, perform subfloor moisture testing in accordance with [ASTM F 2170, Standard Test Method for Determining Relative Humidity in Concrete Slabs Using *in-situ* Probes][ASTM F 1869,Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride] and Bond Tests as described in publication F-5061, Armstrong Flooring Guaranteed Installation Systems, manual, to determine if surfaces are dry; free of curing and hardening compounds, old adhesive, and other coatings; and ready to receive flooring. [Internal relative humidity of the concrete shall not exceed 90%.][MVER shall not exceed 5 lbs./1000 sq. ft./24 hrs.] On installations where both the Percent Relative Humidity and the Moisture Vapor Emission Rate tests are conducted, results for both tests shall comply with the allowable limits listed above. Do not proceed with flooring installation until results of moisture tests are acceptable. All test results shall be documented and retained]

D. [When using Armstrong Flooring S-543 Adhesive), perform subfloor moisture testing in accordance with [ASTM F 2170, Standard Test Method for Determining Relative Humidity in Concrete Slabs Using *in-situ* Probes][ASTM F 1869,Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride] and Bond Tests as described in publication F-5061, Armstrong Flooring Guaranteed Installation Systems, manual, to determine if surfaces are dry; free of curing and hardening compounds, old adhesive, and other coatings; and ready to receive flooring. [Internal relative humidity of the concrete shall not exceed 90%.][MVER shall not exceed 5 lbs./1000 sq. ft./24 hrs.] On installations where both the Percent Relative Humidity and the Moisture Vapor Emission Rate tests are conducted, results for both tests shall comply with the allowable limits listed above. Do not proceed with flooring installation until results of moisture tests are acceptable. All test results shall be documented and retained].

E. [When using Armstrong Flooring Flip™ Spray Adhesive, perform subfloor moisture testing in accordance with ASTM F 2170, “Standard Test Method for Determining Relative Humidity in Concrete Slabs Using *in-situ* Probes” and Bond Tests as described in publication F-5061, "Armstrong Flooring Guaranteed Installation System," manual to determine if surfaces are dry; free of curing and hardening compounds, old adhesive, and other coatings; and ready to receive flooring. Internal relative humidity of the concrete shall not exceed 95%. Do not proceed with flooring installation until results of moisture tests are acceptable. All test results shall be documented and retained].

F. [When using S-240 Epoxy Adhesive, perform subfloor moisture testing in accordance with [ASTM F 2170, “Standard Test Method for Determining Relative Humidity in Concrete Slabs Using *in-situ* Probes”] [ASTM F 1869,“Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride”] and Bond Tests as described in publication F-5061, "Armstrong Flooring Guaranteed Installation System," to determine if surfaces are dry; free of curing and hardening compounds, old adhesive, and other coatings; and ready to receive flooring. [Internal relative humidity of the concrete shall not exceed 90%.][MVER shall not exceed 8 lbs./1000 sq. ft./24 hrs.] On installations where both the Percent Relative Humidity and the Moisture Vapor Emission Rate tests are conducted, results for both tests shall comply with the allowable limits listed above. Do not proceed with flooring installation until results of moisture tests are acceptable. All test results shall be documented and retained]

G. Concrete pH Testing: Perform pH tests on concrete floors regardless of their age or grade level. All test results shall be documented and retained.

3.04 INSTALLATION OF FLOORING

A. Install flooring in strict accordance with the latest edition of Armstrong Flooring Guaranteed Installation Systems manual, F-5061. Failure to comply may result in voiding the manufacturer's warranty listed in Section 1.08.

B. Install flooring wall to wall before the installation of floor-set cabinets, casework, furniture, equipment, movable partitions, etc. Extend flooring into toe spaces, door recesses, closets, and similar openings as shown on the drawings.

C. If required, install flooring on pan-type floor access covers. Maintain continuity of color and pattern within pieces of flooring installed on these covers. Adhere flooring to the subfloor around covers and to covers.

D. Scribe, cut, and fit or flash cove to permanent fixtures, columns, walls, partitions, pipes, outlets, and built-in furniture and cabinets.

E. Adhere flooring to the subfloor without cracks, voids, raising and puckering at the seams. Roll with a 100-pound (45.36 kilogram) roller in the field areas. Hand-roll flooring at the perimeter and the seams to assure adhesion. Refer to specific rolling instructions of the flooring manufacturer.

F. Lay flooring to provide a minimum number of seams. Avoid cross seams, filler pieces, and strips. Match edges for color shading and pattern at the seams in compliance with the manufacturer's recommendations.

G. Install flooring with adhesives, tools, and procedures in strict accordance with the manufacturer's written instructions. Observe the recommended adhesive trowel notching, open times, and working times.

H. [Prepare heat-welded seams with special routing tool supplied for this purpose and heat weld with vinyl welding rod in seams.] [Prepare sealed seams with special seam adhesive supplied for this purpose.] Use methods and sequence of work in conformance with written instructions of the flooring manufacturer. Finish all seams flush and free from voids, recesses, and raised areas.

I. Provide integral flash cove wall base where shown on the drawings, including cove fillet support strip and top edge cap trim. Construct flash cove base in accordance with the flooring manufacturer's instructions. Heat-weld seams as specified for those on the floor].

3.05 INSTALLATION OF ACCESSORIES

A. Install base in lengths as long as practical, with inside corners fabricated from base materials that are mitered or coped. Tightly bond base to vertical substrate with continuous contact at horizontal and vertical surfaces.

B. Fill voids with plastic filler along the top edge of the resilient wall base or integral cove cap on masonry surfaces or other similar irregular substrates.

C. Place resilient edge strips tightly butted to flooring, and secure with adhesive recommended by the edge strip manufacturer. Install edge strips at edges of flooring that would otherwise be exposed.

D. Apply butt-type metal edge strips where shown on the drawings, before flooring installation. Secure units to the substrate, complying with the edge strip manufacturer's recommendations.

3.06 CLEANING

A. Perform initial and on-going maintenance according to the latest edition of the maintenance recommendations for Accolade Plus

3.07 PROTECTION

A. Protect installed flooring as recommended by the flooring manufacturer against damage from rolling loads, other trades, or the placement of fixtures and furnishings. (See Finishing The Job in the latest edition of Armstrong Flooring Guaranteed Installation Systems manual, F-5061.)

END OF SECTION

SECTION 09660

RESILIENT TILE FLOORING (VCT)

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes: Resilient tile flooring and accessories as shown on Drawings and as specified.

1.02 SUBMITTALS

A. Samples: Submit 2 samples of each material specified illustrating color and pattern.

1.03 QUALITY ASSURANCE

A. Qualifications: Installation shall be by qualified installer approved by the manufacturer of the materials.

1.04 PROJECT/SITE CONDITIONS

A. Environmental Requirements: Installation shall not begin until Work of other trades is substantially completed and the area or rooms where flooring is to be installed has been maintained at a minimum temperature of 70 degrees F. for at least 48 hours.

B. Flooring Contractor shall make slab moisture test and submit certification of compliance to manufacturer's dryness requirements (4 lbs. per 1,000 sf/24 hr by calcium cloride test) to Architect and General Contractor prior to installation. NO RESILIENT FLOORING SHALL BE INSTALLED UNTIL A QUALIFYING SLAB MOISTURE TEST HAS BEEN SUBMITTED WITH WRITTEN ACCEPTANCE OF SUBFLOOR BY GENERAL CONTRACTOR.

C. Maintain ambient temperature required by adhesive manufacturer three days prior to, during, and 24 hours after installation of materials.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Furnish products of one of the specified manufacturers, except as approved by the Architect, subject to compliance with specification requirements.
1. Armstrong World Industries
2. Kentile, Inc.
3. Azrock
4. Mannington

2.02 TILE FLOORING

A. Vinyl Composition Tile: FS SS-T-312, Type IV, Multicolor Texture pattern, standard excelon and manufactured by Armstrong or equal, 12 x 12 inch size, 1/8 inch thick.
1. Flammability: ASTM E 648; NFPA 253 ASTM 662 NFPA 258; NBS Smoke Density - 450 or less.

2.03 ACCESSORIES

A. Adhesives: Suitable for the underfloor substrate conditions involved as recommended by the manufacturer of the flooring materials. Adhesives shall be waterproof, stabilized type. Asphalt emulsions are not acceptable.

B. Wall Base: 4" Rubber or Vinyl base

C. Crack and Joint Filler: Waterproof type as recommended by the manufacturer.

D. Sealer: Commercial grade as recommended by flooring manufacturer.

E. Wax: Commercial grade as recommended by flooring manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Examine subsurfaces to receive Work and report detrimental conditions in writing to Architect. ***Commencement of Work will be construed as acceptance of subsurfaces.***

B. Inspect the sub-floor to receive resilient flooring. Do not lay floor covering until sub-floors are in proper condition to receive same. Sub-floors shall be broom clean, free of foreign matter and thoroughly clean before installation.

C. Verify concrete floors are dry to a maximum moisture content.

3.02 PREPARATION

A. Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with subfloor filler.

B. Apply, trowel, and float filler to leave a smooth, flat, hard surface.

C. Prohibit traffic from area until filler is cured.

D. Vacuum clean substrate.

E. Apply primer to floor surfaces as recommended by flooring manufacturer.

3.03 INSTALLATION - TILE FLOORING

A. Install in accordance with manufacturers' instructions and in multi-color pattern to be defined by the Architect.

B. Mix tile from container to ensure shade variations are consistent.

C. Spread only enough adhesive to permit installation of materials before initial set.

D. Set flooring in place, press with heavy roller to attain full adhesion.

E. Lay tile flooring with joints parallel to building lines and with symmetrical tile patterns.

F. Install tile to square grid pattern with all joints aligned. Allow minimum 1/2 full size tile width at room or area perimeter.

G. Terminate flooring at centerline of door openings where adjacent floor finish is dissimilar.

H. Install edge strips at unprotected or exposed edges, and where flooring terminates.

I. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

J. Clean tile and apply semi-gloss type sealer just prior substantial completion acceptance.

3.04 CLEANING

A. After flooring has become well seated and just prior to opening it to traffic, thoroughly clean in accordance with manufacturer's recommendations and apply sealer.

B. Just prior to final acceptance, remove dirt, and debris from floor covering using manufacturers recommended methods and prepare for wax application by Owner.

3.05 PROTECTION

A. Minimize traffic until flooring has become well seated at least 48 hours, at a maintained temperature of not less than 70 degrees F., and do not permit fixtures, equipment, trucks, or similar items on flooring.

END OF SECTION

SECTION 099000

PAINTING

PART 1 - GENERAL

1.1 DESCRIPTION OF WORK:

A. Includes: All interior and exterior surfaces unless specifically excluded.

B. Exterior masonry cleaning and stain/sealing is specified in Section 071500.

C. Cleaning, preparation, and staining of exposed wood truss chords.

1.2 Particular paint colors and their area of use are indicated on the drawings in the color schedule. Types of paint and coating finishes for various substrates are specified in this section.

1.3 "Paint" as used herein means all coating systems materials including primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as prime, intermediate or finish coats.

1.4 Paint exposed surfaces whether or not colors are designated in "schedules", except where natural finish of material is specifically noted as a surface not to be painted. Where items or surfaces are not specifically mentioned, paint same as adjacent similar materials or areas.

1.5 Paint mechanical, electrical, or plumbing equipment that is exposed to public view. If equipment is in a mechanical/electrical room, on a rooftop, or within a screen at ground level, do not paint.

Paint all exposed wiring, conduit, raceways, or piping – interior or exterior.

1.6 Following categories of work are not included as part of field-applied finish work, or are included in other sections of these specifications.

A. Shop Priming: Unless otherwise specified, shop priming of ferrous metal items is included under various sections for structural steel, miscellaneous metal, hollow metal work, and similar items.

B. Pre-Finished Items: Unless otherwise indicated, do not include painting when factory-finishing or installer finishing is specified for such typical items as (but not limited to) wood doors, casework, and light fixtures.

C. Concealed Surfaces: Unless otherwise indicated, painting is not required on surfaces such as walls or ceilings in concealed areas and generally inaccessible areas, furred areas, pipe spaces and duct shafts.
Mechanical equipment screened on the rooftop does not require painting.

D. Finished Metal Surfaces: Metal surfaces of stainless steel, galvanized, those with factory applied finish, such as metal roofing and wall panels, toilet partitions, and similar finished materials will not require finish painting, unless otherwise indicated.

E. Operating Parts and Labels: Moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sinkages, sensing devices, motor and fan shafts will not require finish painting, unless otherwise indicated.

F. Do not paint over any code-required labels, such as Underwriters' Laboratories and Factory Mutual, or any equipment identification, performance rating, name, or nomenclature plates.

1.7 SUBMITTALS:

A. Product Data: Submit manufacturer's technical information including paint label analysis and application instructions for each material proposed for use.

B. Submit a list of specific paint items (type, manufacturer, formulation, and catalog number) for the Architect's review.

C. The Contractor shall submit 2 - 8-1/2 x 11 samples of each paint finish in the specified sheens. Identify samples with color name and number and location on the job.

D. Interior Samples: Coordinate a location on new construction with the Architect, 4’ wide X 8’ high, and apply interior paint system in a field color. Include in sample area a hollow metal frame and apply color for it.

1.8 DELIVERY AND STORAGE:

A. Deliver materials to job site in original, new and unopened packages and containers bearing manufacturer's name and label, and following information:

Name or title of material.
Manufacturer's stock number and date of manufacture.
Manufacturer's name.
Chemical composition.
Supplier's name and address.
Color name and number.
Application instructions.
Material Safety Data Sheets.

B. Maintenance Stock: Contractor shall supply, new and unopened, 2 gallons of each type and color of each finish used on the project as maintenance stock for Owner. Label as indicated above and deliver for Owner's storage.

1.9 JOB CONDITIONS:

A. Apply water-base paints only when temperature of surfaces to be painted and surrounding air temperatures are between 50 degrees F. and 90 degrees F., unless otherwise permitted by paint manufacturer's printed instructions.

B. Do not apply paint in rain, or when relative humidity exceeds 85%; or to damp or wet surfaces; unless otherwise permitted by paint manufacturer's printed instructions.

C. Painting may be continued during inclement weather if areas and surfaces to be painted are enclosed and heated within temperature limits specified by paint manufacturer during application and drying periods.

1.10 QUALITY CONTROL: Comply with recommendations of the Painting and Decorating Contractors of America (PDCA) Technical Manual.

PART 2 - PRODUCTS

2.1 COLORS AND FINISHES:

A. Colors are indicated on the color schedule and are typically non-stock tints, specified by a manufacturer’s color numbers. The particular manufacturer who supplies paint for project shall match these colors, subject to approval of Architect.

B. Color Pigments: Pure, non-fading, applicable types to suit substrates and service indicated.

C. Paint Coordination: Provide finish coats which are compatible with prime paints used. Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information on characteristics of finish materials proposed for use, to ensure compatible prime coats are used. Provide barrier coats over incompatible primers/finishes or remove and reprime as required. Notify Architect in writing of any anticipated problems using specified coating systems with substrates primed by others.

2.2 MATERIAL QUALITY: The following manufacturers' premium products have been used to set a standard of quality for the project. Products have been selected around the Sherwin Williams product line to establish a standard of quality, unless otherwise noted. All paints shall be at least VOC compliant, if not better.

1. Other acceptable paint manufacturers include: Glidden, Dunn Edwards, Pittsburgh, Sinclair.

2.3 EXTERIOR PAINT SCHEDULE:

A. Ferrous Metal (Miscellaneous metals, structural steel, trim, etc.):

Prep – SSPC-SP2
1 coat – DTM Acrylic Primer Finish
2 coats – A-100 Exterior Semi-Gloss

B. Zinc-Coated Metal:

Prep – SSPC-SP2
1 coat – DTM Acrylic Primer Finish
2 coats – A-100 Exterior Semi-Gloss

C. Steel Handrails, HM Doors and Frames:

Prep – SSPC-SP2
1 Coat – DTM Acrylic Primer Finish
2 Coats – Duration Exterior Acrylic Latex Semi-gloss

2.4 INTERIOR PAINT SCHEDULE

A. Gypsum Drywall:
Prep – S-W 8 or 12

Eg-Shel
1 coat – PrepRite Classic Latex Primer
2 coats – ProMar Zero VOC Interior Latex Eg-Shel
Use: Typical interior

B. Ferrous Metal:
Prep – SSPC-SP2
1 coat – DTM Acrylic Primer Finish
2 coats – Pro Industrial Acrylic Coating B66W00661 Semigloss
Use: Hollow metal doors and frames; handrails, miscellaneous steel, structural steel, stairs
Spot prime only as needed

Prep – SSPC-SP2
1 coat – DTM Acrylic Primer Finish
2 coats – Pro Industrial Acrylic Dryfall
Use: Exposed structural steel and metal deck; spot prime only as needed

C. Masonry (Painted)

1 coat – Prep-Rite Block Filler
1 coat – Loxon Acrylic Masonry Coating and Primer
2 coats – ProMar Zero VOC Interior Latex Eg-Shel

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D. Plywood Panels:

1 coat – Multi-Purpose Acrylic-Alkyd Primer
1 coat – ProMar Zero VOC Interior Latex Eg-Shel
Leave one FIRE RETARDANT marking exposed on each wall.

E. Exposed Metal Roof Deck

1 coat – ProIndustrial Pro-Cryl Universal Primer
1 coat – ProIndustrical Acrylic Dryfall
Primer – only touch up as needed

PART 3 - EXECUTION

3.1 INSPECTION

A. Applicator must examine areas and conditions under which painting work is to be applied and notify Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in a manner acceptable to Applicator.

1) Starting of painting work will be construed as Applicator's acceptance of surfaces and conditions within any particular area.

2) Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, loose materials, or other conditions detrimental to formation of a durable paint film.

3.2 SURFACE PREPARATION:

A. General: Perform preparation and cleaning procedures in accordance with paint manufacturer's instructions and as herein specified, for each particular substrate condition.

B. Remove hardware, hardware accessories, machined surfaces, plates, lighting fixtures, and similar items in place and not to be finish-painted, or provide surface-applied protection prior to surface preparation and painting operations. Remove, if necessary, for complete painting of items and adjacent surfaces. Following completion of painting of each space or area, reinstall removed items.

C. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease prior to mechanical cleaning. Program cleaning and painting so that contaminants from cleaning process will not fall onto wet, newly-painted surfaces.

1) Ferrous Metals: Clean ferrous surfaces, which are not galvanized or shop-coated, of oil, grease, dirt, loose mill scale and other foreign substances by solvent or mechanical cleaning.

a) Touch-up shop-applied prime coats on structural steel, doors and frames, handrailings, wherever damaged or bare, where required by other sections of these specifications. Clean and touch-up with same type shop primer.

2) Galvanized Surfaces: Clean free of oil and surface contaminants with non-petroleum based solvent. Etch or otherwise prepare surface as recommended by paint manufacturer.

3) Masonry: Surface shall be clean and free of dirt, mortar and other unwanted substances.

4) Plywood and Wood: All surfaces shall be clean and free of dirt, oils, and sawdust. Use bleach to treat any mildew areas and allow to thoroughly dry. Remove staples and any visible labels, marks from truss chords.

3.3 MATERIALS PREPARATION:

A. Mix and prepare painting materials in accordance with manufacturer's directions.

B. Store materials not in actual use in tightly covered containers. Maintain containers used in storage, mixing and application of paint in a clean condition, free of foreign materials and residue.

C. Stir materials before application to produce a mixture of uniform density, and stir as required during application. Do not stir surface film into material.

3.4 APPLICATION:

A. General: Apply all coatings in accordance with manufacturer's directions, using only recommended materials and methods. Use type of applicators and techniques best suited for substrate and type of material being applied.

B. All interior areas to be painted shall be dust-free and illuminated.

C. Final paint thickness recommended by manufacturer is only a minimum; all paint systems shall totally cover and consistently hide the substrate upon which they are applied. Apply additional coats when undercoats, stains or other conditions show through final coat of paint, until paint film is of uniform finish, color and appearance. Give special attention to insure that surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.

D. Paint surfaces behind movable equipment same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or cabinetry with prime coat only before final installation of equipment.

E. Paint exposed-to-view mechanical, electrical, or plumbing equipment to match adjacent surfaces. Do not paint mechanical or electrical equipment on roofs or in mechanical rooms or yards.

F. Omit first coat (primer) on metal surfaces which have been shop-primed, touch-up painted or prefinished, unless otherwise indicated.

G. Scheduling Painting: Apply first-coat material to surfaces that have been cleaned, pretreated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1) Allow sufficient time between successive coatings to permit proper drying. Do not recoat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

2) Coordinate for application of radiant barrier to the underside of all roof decks prior to beginning of insulation.

H. Minimum Coating Thickness: Apply materials at not less than manufacturer's recommended spreading rate, to establish a total dry film thickness as recommended by coating manufacturer, and to totally and consistently cover surface to which it is applied without gaps, skips, runs, and holidays.

I. Prime Coats: Apply prime coat of material which is required to be painted or finished, and which has not been prime coated by others.

1) Touch up previously primed surfaces that have been damaged prior to painting.
2) Block Filler: Brush on and work into surface as directed by manufacturer to fill pores in block.

J. Recoat primed and sealed surfaces where there is evidence of suction spots or unsealed areas in first coat, to assure a finish coat with no burn-through or other defects due to insufficient sealing.

K. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness or other surface imperfections will not be acceptable.

M. Completed Work: Match approved samples for color, texture and coverage. Remove, refinish or repaint work not in compliance with specified requirements.

3.5 CLEAN-UP AND PROTECTION:

A. Clean-Up: During progress of work, remove from site discarded paint materials, rubbish, cans and rags at end of each work day and dispose of properly.

B. Upon completion of painting work, clean window glass, pre-finished window frames, and other paint-spattered surfaces. Remove spattered paint by proper methods of cleaning and scraping, using care not to scratch or otherwise damage finished surfaces.

C. Protection: Protect work of other trades, whether to be painted or not, against damage by painting and finishing work. Correct any damage by cleaning, repairing or replacing, and repainting, as acceptable to the Architect.

D. Provide "Wet Paint" signs as required to protect newly-painted finishes. Remove temporary protective wrappings provided by others for protection of their work, after completion of painting operations.

E. Disposal of Waste Materials: Recycle waste paint and empty containers if possible. Do not dump paint or clean brushes in building drains or on the site.

END OF SECTION 099000

SECTION 101423

ROOM SIGNAGE

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Room-identification signs, interior throughout.

B. Cast aluminum building letters and numerals are specified in Section 101400.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings:

1. Include fabrication and installation details and attachments to other work.
2. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
3. Show message list, typestyles, graphic elements, and layout for each sign.
4. Room-Identification Signs: Full-size Sample.

C. Sign Schedule: Each room designation specified or indicated on Drawings shall have a sign. Submit sign schedule to owner prior to fabrication for final room names and room numbers.

PART 2 - PRODUCTS

2.1 ROOM SIGNS

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

All Sign Systems
Mountain States Specialties
Effective Signs
Signsource

2.2 ROOM SIGNS

A. Material shall match existing building.

B. Paints and Coatings for Sheet Materials: Inks, dyes, and paints that are recommended by manufacturer for optimum adherence to surface and are UV and water resistant for colors and exposure indicated.

C. Colors: Selected by Architect and in accordance with local and Federal Standards.

D. Finish and Contrast: Matte finish, with characters contrasting with background by at least 20%.

E. Letters and Braille Characters:
   1. Raised 1/32” upper case, san serif or simple serif, accompanied with Grade 2 Braille. Raised characters at least 5/8” high.
   2. Letters and Numbers: Width-to-height ratio from 3:5 to 1:1, stroke width to height ratio from 1:5 to 1:10.
   3. Text: See Door Schedule and sign details.
   4. Mounting: Two-Face Tape: Manufacturer's standard high-bond, foam-core tape, 0.045 inch thick, with adhesive on both sides.

2.3 FABRICATION

A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.

B. Surface-Engraved Graphics: Machine engrave characters and other graphic devices into panel surface indicated to produce precisely formed copy, incised to uniform depth.

   1. Engraved Metal: Fill engraved graphics with manufacturer's standard baked enamel.

2.4 GENERAL FINISH REQUIREMENTS

A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of signage work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.

1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
2. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.

B. Room-Identification Signs: Install in locations on walls as indicated and according to accessibility standard.

C. Mounting Methods:

1. Two-Face Tape: Clean bond-breaking materials from substrate surface and remove loose debris. Apply tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage. Keep strips away from edges to prevent visibility at sign edges. Place sign in position, and push to engage tape adhesive.

D. Signs Mounted on Glass: Provide opaque sheet matching sign material and finish onto opposite side of glass to conceal back of sign.

3.3 ADJUSTING AND CLEANING

A. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.

B. Remove temporary protective coverings and strippable films as signs are installed.

C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

END OF SECTION 101423

SECTION 102800

TOILET ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUBMITTALS

A. General: Submit product data for each toilet accessory item specified, including construction details relative to materials, dimensions, gages, profiles, mounting method, specified options, and finishes.

1.3 QUALITY ASSURANCE

A. Inserts and Anchorages: Furnish accessory manufacturers' standard inserts and anchoring devices that must be set in concrete or built into masonry. Coordinate delivery with other work to avoid delay.

1.4 WARRANTY: Submit a written warranty executed by mirror manufacturer, agreeing to replace any mirrors that develop visible silver spoilage defects within warranty period.

A. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS: Bobrick numbers are used for specification purposes. Other manufacturers' products that are acceptable include:

1. A & J Washroom Accessories.
2. American Specialties, Inc.
3. Bradley Corporation.
4. McKinney/Parker.

2.2 MATERIALS, GENERAL

A. Stainless Steel: AISI Type 302/304, with polished No. 4 finish, 0.034-inch (22-gage) minimum thickness.

B. Brass: Leaded and unleaded, flat products, ASTM B 19; rods, shapes, forgings, and flat products with finished edges, ASTM B 16; Castings, ASTM B 30.

C. Sheet Steel: Cold-rolled, commercial quality ASTM A 366, 0.04-inch (20-gage) minimum. Surface preparation and metal pretreatment as required for applied finish.

D. Galvanized Steel Sheet: ASTM A 527, G60.

E. Chromium Plating: Nickel and chromium electro-deposited on base metal, ASTM B 456, Type SC 2.

F. Galvanized Steel Mounting Devices: ASTM A 153, hot-dip galvanized after fabrication.

G. Fasteners: Screws, bolts, and other devices of galvanized steel where concealed.

2.3 SURFACE MOUNTED TOWEL DISPENSER: By Owner.

2.4 RECESSED WASTE RECEPTACLE: 18 ga. cabinet with 22 ga. removable 12 gal. receptor, all edges hemmed. Provide optional vinyl liner. Equal Bobrick B-3644.

2.6. TOILET TISSUE DISPENSERS: By Owner.

2.7 SOAP DISPENSERS: By Owner.

2.8 GRAB BARS: 18 ga. stainless steel, concealed mounting with snap flange, 1-1/4" diameter with peened or other abrasive finish. Equal of ASI 3700 series of lengths and configurations as shown on the drawings.

2.9 MIRRORS: Stainless steel channel-framed mirror. Equal Bobrick B-165 1836.

2.10 MOP STRIP: Stainless steel with 3 mop/broom holders, equal Bobrick 223X24.

2.11 HAND DRIERS: High-velocity, automatically activated hand drier. Thermo-set enamel coated steel casing, adjustable velocity and sound, and heat – high, medium, low. Equal Excel XLERATOR Hand Dryer.

2.12 FABRICATION

A. Surface-Mounted Toilet Accessories, General: Except where otherwise indicated, fabricate units with tight seams and joints, exposed edges rolled. Hang doors or access panels with continuous stainless steel piano hinge. Provide concealed anchorage wherever possible.

B. Recessed Toilet Accessories, General: Except where otherwise indicated, fabricate units of all-welded construction, without mitered corners. Hang doors or access panels with full-length, stainless steel piano hinge. Provide anchorage that is fully concealed when unit is closed.

C. Keys: Provide universal keys for access to toilet accessory units requiring internal access for servicing, resupply, etc. Provide minimum of six keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install toilet accessory units according to manufacturers' instructions, using fasteners appropriate to substrate as recommended by unit manufacturer. Install units plumb and level, firmly anchored in locations and at heights indicated.

B. Install grab bars and baby changing station to withstand a downward load of at least 250 lbf, complying with ASTM F 446. Coordinate for support/blocking in walls.

C. Provide sanitary sealant, as specified in Section 079200 - Joint Sealers, concealed under surface flanges against walls.

3.2 ADJUSTING AND CLEANING

A. Adjust toilet accessories for proper operation and verify that mechanisms function smoothly. Replace damaged or defective items.

B. Clean and polish all exposed surfaces strictly according to manufacturer's recommendations after removing temporary labels and protective coatings.

END OF SECTION 102800

SECTION 104413

FIRE EXTINGUISHERS AND CABINETS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Fire extinguishers.
2. Fire extinguisher cabinets.

B. Provide extinguishers with cabinets located as shown on the drawings.

1.3 SUBMITTALS

A. General: Submit product data for fire extinguishers and cabinets, including rough-in dimensions, details showing mounting methods, relationships of box and trim to surrounding construction, door hardware, cabinet type and materials, trim style, door construction, panel style, and materials.

1.4 QUALITY ASSURANCE

A. UL-Listed Products: Fire extinguishers shall be UL listed with UL listing mark for type, rating, and classification of extinguisher.

PART 2 - PRODUCTS

2.1 FIRE EXTINGUISHERS

A. General: Provide fire extinguishers for each cabinet and other locations indicated in colors and finishes selected by Architect from manufacturer's standards that comply with local codes.

B. Multipurpose Dry Chemical Type: UL-rated 3A-40BC, 5-lb nominal capacity, in enameled steel container with chrome-plated brass valves.

2.2 CABINET

A. Construction: Manufacturer's standard box, with trim, frame, door, and hardware to suit cabinet type, trim style, and door style indicated. Weld joints and grind smooth. Miter and weld perimeter door frames.

1. Cabinet equal of JL Companies Ambassador Series.

B. Cabinet Mounting: Suitable for the following mounting conditions:

1. Semi-recessed into standard partitions.

2. Trim Style: 2-1/2” rolled trim returning to wall.

C. Door and Trim Material and Construction: Manufacturer's standard door construction, of material indicated, coordinated with cabinet types and trim styles selected.

1. Baked enamel finish.
2. Door Glazing: Full glazed, tempered clear.

D. Door Hardware: Provide pull with roller catch and continuous hinge.

2.3 FINISHES FOR CABINETS, GENERAL

A. Comply with NAAMM "Metal Finishes Manual" for recommendations relative to applying and designating finishes.

2.4 STEEL CABINET INTERIOR FINISHES:

A. Surface Preparation: Solvent-clean surfaces complying with SSPS-SP 1 to remove dirt, oil, grease, and other contaminants that could impair paint bond. Remove mill scale and rust, if present, from uncoated steel, complying with SSPC-SP 5 (white metal blast cleaning) or SSPC-SP 8 (pickling).

B. Baked-Enamel Finish: Immediately after cleaning and pretreatment, apply manufacturer's standard two-coat baked-enamel finish consisting of prime coat and thermosetting topcoat. Comply with paint manufacturer's instructions for applying and baking to achieve a minimum dry film thickness of 2.0 mils. Paint entire cabinet inside and out, color - white.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine walls and partitions for thickness and framing for cabinets to verify cabinet depth and mounting prior to cabinet installation.

3.2 INSTALLATION

A. Follow manufacturer's printed instructions for installation.

B. Install in locations and at mounting heights indicated or, if not indicated, at heights to comply with applicable regulations of governing authorities.

1. Prepare recesses in walls for cabinets as required by type and size of cabinet and style of trim and to comply with manufacturer's instructions.
2. Fasten mounting brackets and cabinets to structure, square and plumb.

END OF SECTION 104413

SECTION 312000

EARTHWORK AND TRENCHING

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
1. Site preparation and grading.
2. Building excavating and backfilling.
3. Trenching, backfilling and compacting for building utilities.
4. Excavation and grading for site paving, curbs and sidewalks.
5. Finish grading.

B. This Section is a summary of earthwork to be performed based on the geotechnical report and addenda referenced below.

1.02 DEFINITIONS

A. Native or natural soils: Undisturbed soils present at site in their natural state or conditions. Materials which are essentially free of vegetation or organic matter and do not include trash or other deleterious materials.

B. Fill soils: Materials present at site that have been disturbed, possibly transported, and are not in their natural undisturbed state.

C. Imported fill soils: Materials transported onto site.

D. Finished Grade: Required final grade elevation.

E. Building Pad: A minimum of five feet beyond the extreme outer edge of footings of the building perimeter walls and column lines.

1.03 SUBMITTALS

A. Test Reports: Submit test reports for field density tests.

1.04 QUALITY ASSURANCE

A. Staking: Staking shall be performed by a Civil Engineer or Land Surveyor currently registered in the state where the Project is located. One person only shall be responsible for staking the Project.

B. Observation of Geotechnical Engineer: Every phase of the earthwork including excavations, fill placement, trenching and backfill shall be performed under observation and testing directed by the Geotechnical Engineer of Record.

C. Tests: Inspection and testing of earthwork shall be performed by a testing laboratory in accordance with Section 01400.
1. Tests of materials may be performed to ensure conformance with specified requirements.
2. Provide one field density test for every 100 lineal feet of footings and at each change of grade. Take one test in each isolated footing location.
3. Provide one field density test of under-slab fill for every 3,000 square feet of

building area per lift.

4. Provide two field density tests of backfill at locations and elevations directed.
5. Provide one field density test for every 7,500 square feet of pavement area subgrade.
6. Soil compaction which does not meet the specified requirements shall be recompacted and reworked as directed by the Soils Engineer through the Architect.

1.05 SITE CONDITIONS

ßò Soil Report:

ïò Soil report provided by the Owner for design of this Project was prepared by Geotechnical Testing Services, Inc. dated July 2021 and is attached following this section to be used as reference information for earthwork preparation.

îò Neither the Owner or Architect guarantees the accuracy of the report nor the continuity of the soil conditions indicated at boring locations.

PART 2 PRODUCTS

2.01 MATERIALS

A. Fill Soil: Existing native soils or existing fill soils at the site are only suitable for use as engineered fill material as noted in the soils report.

B. Import Fill Soils: The Geotechnical Engineer should approve imported fill soils before hauling to the site.

PART 3 EXECUTION

See Geotechnical Reports noted above.

END OF SECTION

City of San Luis -
Fleet Maintenance Building Expansion
McCain Avenue
San Luis, Arizona

Geotechnical Investigation

GTS Job No: 21-098
July 2021



Prepared for:
Thompson Design Architects
675 W 16th Street
Yuma, Arizona 85365

Prepared by:
Geotechnical Testing Services, Inc
1044 East 21st Street
Yuma, Arizona 85365

Geotechnical Testing Services, Inc. 1044 East 21st Street Yuma, Az. 85365
Materials Testing Laboratory Phone (928) 329-4695 Fax (928) 329-4782

July 22, 2021

Thompson Design Architects
675 W 16th Street
Yuma, Arizona 85364

Attention: Rod Fowler

Reference: City of San Luis – Fleet Maintenance Building Expansion
McCain Avenue
San Luis, Arizona 85349

Dear Mr. Fowler,

Geotechnical Testing Services is pleased to present the attached Geotechnical Investigation for the referenced project.

The purpose of our investigation was to evaluate the subsurface soil conditions at the proposed site in order to develop geotechnical recommendations to aid in the project design and construction.

Based on the results of our field and laboratory testing it is our opinion that the referenced project may be constructed provided that the recommendations presented in this report are incorporated.

We appreciate the opportunity to provide our services for the project. If you have any questions regarding this report or if we may be of any assistance please contact me.

Sincerely,

Geotechnical **T**esting **S**ervices**, I**nc.

Courtney M. Arviso P.E.
President



Exp 06-30-2023

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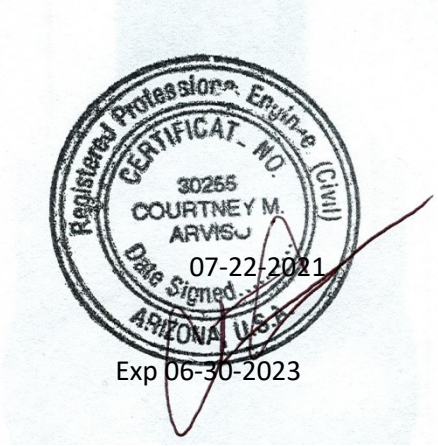
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Appendix A – Vicinity Map, Site Plan and Bore Log
Appendix B – Laboratory Test Data GTS

Report No: 21-098



1. INTRODUCTION

1.1 General

This report represents the findings of our Geotechnical Investigation for the City of San Luis – Fleet Maintenance Building Expansion in San Luis, Arizona (see Appendix A). The purpose for our investigation was to explore the subsurface conditions of the proposed site at various locations. This exploration was used to help develop the Geotechnical Engineering recommendation.

1.2 Project Description

The proposed project is understood to consist of a single story 8,600 square foot building addition. The building will be constructed of a pre-engineered metal building with spread and continuous footings and a concrete slab on grade. The maximum uniform wall loads are expected to be approximately 1-2 kips per linear foot. Expected column loads range from 10-20 kips. If any of the above design assumptions change during the final design stage, our office should be notified to review and possibly revise our recommendations.

2. FIELD EXPLORATION

Geotechnical Testing Services advanced two (2) test bore holes to a depth of fifteen (15) feet within the proposed building pad area (see Appendix A).

All of the boreholes were advanced using a CME-55 drill rig. Samples were obtained from all of the boring locations using either a split spoon or ring sampler or from the auger cuttings.

A staff engineer maintained logs of the bore holes during the exploration. The final form of the subsurface logs was edited after review of the retrieved samples and the laboratory data. In addition standard penetration tests were conducted at various holes and depths using 2.0-inch outside diameter split spoon sample. The split spoon was advanced using a 140 pound hammer falling a distance of 30 inches. The blow counts corresponding to the last 12 inches of penetration were recorded on the boring sheets.

All of the soil that was encountered was sampled, logged and visually classified in the field. These samples were re-evaluated in the laboratory after further testing and investigation. The soils were classified in accordance with the Unified Soils Classification System.

3. LABORATORY TESTING

The following laboratory tests were conducted on selected samples to assist in classifying and evaluating their engineering properties:

Schedule of Laboratory Tests

Test	ASTM Standards
Sieve Analysis	ASTM D-4318 & D1140
Atterberg Limits	ASTM D-4318
Moisture Density	ASTM D-698

*All of the results of our laboratory testing can be found in Appendix B.

4. SITE CONDITIONS

4.1 Site Description

The proposed new building addition will be located directly east and west of the existing maintenance building. This area is currently vacant with some existing aggregate base material and desert vegetation.

4.2 Site Soil Conditions

The subsurface field exploration indicates that the soil typically consists of brown, dry, loose to medium dense, poorly grade sand with silt (SP-SM) or poorly graded sand (SP). There were traces of rock throughout. The relationships of these layers are presented within the boring logs found in Appendix A.

During the exploration the ground water level was not encountered. According to the latest U.S.B.R. Ground Water Map, the ground water level is approximately 90 - 100 feet below the existing grade. The moisture content of the soil sampled, ranged from 0.5 to 2.1 percent.

4.3 Seismic Considerations

Based on our evaluation, several faults have the potential of generating earthquakes that will cause strong ground motions in the City of San Luis. The Yuma County region is located within the area of greatest risk for earthquake ground shaking within the state, The Basin and Range Physiographic Province. San Luis is also in relatively close proximity to major active fault zones at the boundary of the North American and Pacific lithospheric plates in southern California and northern Mexico. The closest approach of the San Andreas system to San Luis is approximately 65 miles. Ground shaking hazard is also present from the San Jacinto system (65 miles), Imperial fault (28 miles) and the Cerro Prieto fault (49 miles). However, Basin and Range faults have a relatively

long and uncertain recurrence times, that is, the time between large earthquakes occurs on a scale of tens to hundreds of thousands of years.

Whereas large earthquakes occur on plate boundary faults on a scale of hundreds of years, or less. Strong ground measurements from the Northridge, Kobe and other large earthquakes have shown that ground motions are significantly greater near an earthquake source. The proposed site is located within a Seismic Risk Area and the design should include seismic provisions as included in the 2018 International Building Code.

Longitude	114°	46 Minutes	31 Seconds West
Latitude	32°	29 Minutes	59 Seconds North

*The site soil classification is Type 'D'.

4.4 Liquefaction

Since the ground water level is fairly deep and there is not a potential for saturated sands liquefaction is unlikely for this site. Liquefaction is the temporary loss of bearing strength due to the shear waves passing through the saturated granular soil layers. This causes the distortion of the granular structure, which causes the particles to collapse. This collapse then increases the pore-water pressure.

It is understood that the site lies within an area of seismic risk. Therefore it is recommended that suitable precautions be applied to the building design to help prevent major structural damage in the event of an earthquake. Recommendation for the earthquake resistant design parameters should be obtained from the 2018 International Building Code.

5. DISCUSSION AND RECOMMENDATIONS

5.1 Site Preparation

The following site recommendations should be followed within any building pad and foundation area. The foundation area includes a five (5) foot perimeter outside of the footing outline of the new building except for the areas adjacent to existing buildings. Any debris larger than three (3) inches in diameter and all vegetation on the proposed site at the time of construction should be removed.

5.2 Earthwork

Building Pad Preparation

The following steps should be followed within any building pad or foundation area.

A. Clean and grub the area as mentioned above in section 5.1.

B. Remove and stockpile enough of the native soil to provide a minimum of eighteen (18) inches of moisture conditioned and compacted native soil below the bottom of the lowest new footing.

C. Moisture condition and compact the bottom twelve (12) inches of the excavation area to +/- 2% of optimum and compact to 95% of ASTM D-698

D. Replace the excavated sandy soil in 9-inch maximum loose lifts. Moisture condition each lift to +/-2% of optimum moisture content and compacted to 95% per ASTM D-698.

E. If additional fill material is needed to obtain the final finished grade elevations, this material should meet the requirements listed below and be placed in the same manner that is described in part D above.

F. In areas other than building pads which are to receive concrete flatwork, these areas should have the top 12 inches of the native soil scarified and moisture conditioned to +/-2% of optimum and compacted to 95% per ASTM D-698.

G. All imported fill needed to achieve the required finished pad elevation must meet the following specifications:

1. Clean Non- expansive
2. U.S.C.S. Classification SM, SP, or SP-SM
3. Maximum allowable rock size of 3 inches in diameter.
4. Percent passing the No. 200 sieve must be within 5 to 20 %.

NOTE: All imported fills must be approved by the Geotechnical Engineer before placing.

1. The native sands are suitable for fill material.

5.3 Foundation

Shallow spread footing and continuous wall footings are suitable to support the proposed structure provided that they are founded on properly prepared and compacted soil. The foundation may be designed using maximum bearing value of **2,850 PSF** for dead and live loads. The allowable soil pressure may be increased by one-third for short term loads induced by wind or a seismic event.

All exterior wall footings should be embedded a minimum of 18 inches below the compacted building pad or the lowest adjacent final grade. Interior footings should be embedded a minimum of 16 inches below compacted building pad. Continuous wall footings should have a minimum width of 18 inches. Spread footing should be designed by the Structural Engineer. Settlements are estimated to not exceed ¾ inch with the differential settlement equal to about ½ inches when measured across a horizontal distance of fifty (50) feet.

5.4 Concrete Slab on Grade

The concrete slab and flatwork should be designed by the Structural Engineer. The floor slab can either be monolithically placed with the foundation or doweled after footings have been placed. The compacted pad shall be moistened to within 2% of optimum moisture just prior to concrete placement.

Concrete slab and flatwork reinforcement recommendations should be provided by the Structural Engineer.

Contraction joints should be placed at 12 feet maximum on center each way for all concrete floor slabs. All joints should form approximately square patterns to help reduce randomly oriented cracks. Saw cut the joints to depth of ¼ inch the slab thickness. All joints should be thoroughly cleaned out and filled with a semi-rigid caulking. All exterior walkways and driveways should be placed on 12 inches of moistened and compacted native soil.

All Portland cement concrete will have a slump that does not exceed 5 inches. The concrete mix design should use Type II Portland cement. Aggregate for the mix should meet the requirements of ASTM C-33 for course and fine aggregates. The mix design should be reviewed and approved by the Structural Engineer before any is placed. It is recommended that all concrete placement and curing operations be performed in accordance with the latest edition of the American Concrete Institute (ACI) manual. If there are moisture sensitive flooring being used within the new building a 10-mil vapor barrier should be placed below the concrete slab on grade. This barrier will need to be installed in accordance with the latest ACI standards.

5.5 Pavement Section

The following steps should be followed within the parking lot areas.

A. Subgrade

1. The areas to receive asphalt pavement should be free of all vegetation and debris per Section 5.1.
2. The top 12 inches of native soil should be scarified, and moisture conditioned to +/- 2 % of optimum. The soil should then be compacted to 95% of ASTM D-698.
3. The moisture content of the subgrade should be maintained prior to the aggregate base coarse being placed.

B. Pavement Section

1. Use 3 inches of asphalt over 6-inches of aggregate base coarse.
2. The asphalt will meet the current Yuma County Standards for ½ inch maximum single course mix. Compact the asphalt pavement to 95% using a 75 blow Marshall.
3. The aggregate base coarse will meet the Yuma County Standards. The aggregate base will be moisture conditioned to +/-2% and compacted to 95% of ASTM D-698.

Note: If concrete is used as a pavement section use 6" of **3,500 psi** concrete over 6" of ABC. Compact the ABC as stated above.

5.6 Resistance to Lateral Loads

If free unrestrained walls are planned to retain level, predominantly granular, non-expansive soils, an active lateral soil pressure of 35 pounds per cubic foot equivalent fluid pressure may be used. For restrained retaining walls under the same conditions as stated above, an active lateral soil pressure of 55 pounds per cubic foot equivalent fluid pressure may be used. The passive soil resistance of properly compacted backfill against footings or stem walls is 285 pounds per cubic foot. The recommended coefficient of friction is 0.30.

The lateral pressures stated above are ultimate values. Therefore, suitable factors of safety should be incorporated into the design. The Structural Engineer should also consider additional lateral loads induced by surcharges, adjacent footings or seismic activity.

5.7 Drainage

Positive drainage should be maintained away from the building pad and foundation. Water should not be allowed to drain or pond near or around these areas. All the roof drains should be directed away from all the building foundation system.

If onsite retention basins are used, curbing should be used around these basins to help prevent erosion of the basin side slopes. All curbs should be extended a minimum of 6 inches below the bottom of the subgrade to help prevent any water migration under the pavement. Maintenance of proper drainage is necessary to prolong the service life of the pavement.

Any landscaping used around the foundation area should be kept to a minimum. This vegetation should be of the variety that does not require large amounts of water or that does not have large root systems that could adversely affect the foundation system. All the landscape irrigation systems should be placed away form the foundation and should be maintained and serviced regularly.

VI. CLOSURE

6.1 Limitations

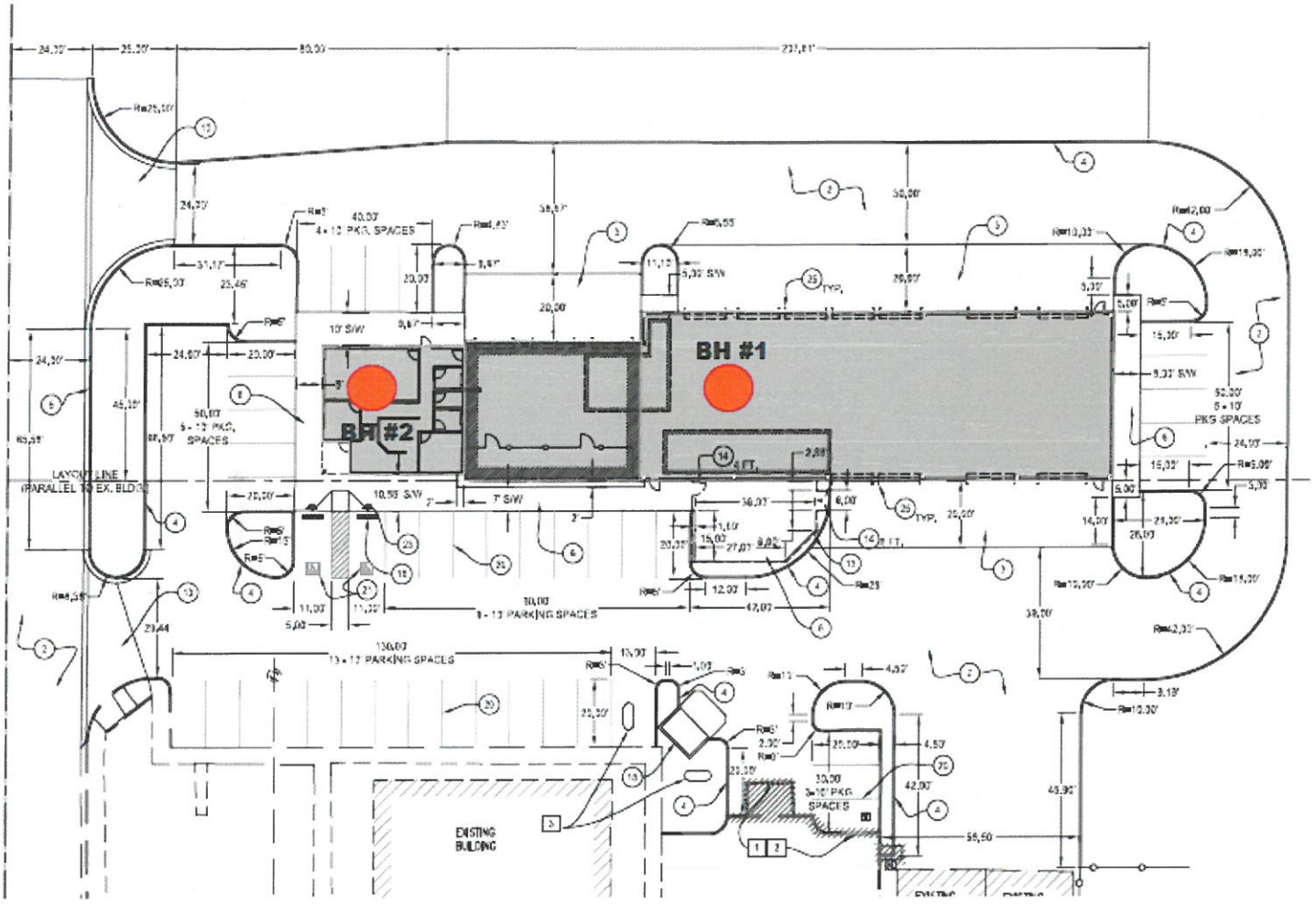
The conclusions and recommendations in this report are based upon the proposed design parameters, subsurface findings and the assumptions that the soil condition does not deviate appreciably from the test borings.

If there is any deviation of the soil condition or the design parameters, GTS should be notified and retained to review these changes, and make the required recommendations. If changes are made or encountered and GTS is not contracted to review such changes we will not be responsible for the impact of these changes on the structure or the site.

It is recommended that GTS be retained to observe and test the earthwork process to properly ensure that the recommendations are carried out. All testing for this project should be done in accordance with the latest Yuma County Standards.

This report has been prepared for the exclusive use of Thompson Design Architects for the site specified within this report.

APPENDIX A



SITE PLAN

SAN LUIS FLEET MAINTENANCE BUILDING EXPANSION

McCAIN AVENUE
SAN LUIS, ARIZONA

GEOTECHNICAL TESTING SERVICES, INC.

1044 E. 21st Street - Yuma, Arizona
Phone: (928) 329-4695

KEY TO SYMBOLS

Symbol	Description
Strata symbols	
	Poorly graded sand with silt
	Poorly graded sand

Notes:

1. Exploratory borings were drilled on 07/15/21 using a core machine and hand auger

2. Groundwater was not encountered below the existing surface at the time of drilling.

3. Boring locations were taped from existing features and elevations extrapolated from the final design schematic plan.

4. These logs are subject to the limitations, conclusions, and recommendations in this report.

5. Results of tests conducted on samples recovered are reported on the logs.

LOG OF BORING No. 1

PROJECT: SAN LUIS FLEET MANAGEMENT BUILDING **PROJECT NO.:** 21-098
CLIENT: THOMPSON DESIGN ARCHITECT
PROJECT LOCATION: 1165 McCAIN AVENUE
LOCATION: SEE SITE PLAN **ELEVATION:** 100
DRILLER: GTS **LOGGED BY:** CMA
DRILLING METHOD: CME-55 **DATE:** 7/15/21
DEPTH TO - WATER> INITIAL: ▽ No. GW **AFTER 24 HOURS:** ▽ No. GW **CAVING>** C

Depth (feet)	Description	Graphic	Sample No.	Blow Counts	% < #200	TEST RESULTS (Plastic Limit ⊢—⊣ Liquid Limit; Water Content - ●; Penetration - ▨; 10 20 30 40 50)
0						
	Brown, Dry, poorly graded sand with silt with traces of rock.		1-0		11.8	
	Brown, Dry, poorly graded sand with silt		1-1	3 3 4	5.3	
5						
	5.0					
	Brown, Dry, granular, poorly graded sand		1-2	4 4 5	4.1	
10	Brown, Dry, granular, poorly graded sand		1-3	3 5 7	2.9	
15						
	Boring terminated at 15 ft. Brown, Dry, poorly graded sand with traces of rock		1-4	4 6 9	4.2	
20						
25						
30						
35						

This information pertains only to this boring and should not be interpreted as being indicitive of the site.

GEOTECHNICAL TESTING SERVICES
1044 E. 21st STREET
YUMA, AZ 85365
Ph. (928) 329-4695 • Fax (928) 329-4782

Figure 1

LOG OF BORING No. 2

PROJECT: SAN LUIS FLEET MANAGEMENT BUILDING **PROJECT NO.:** 21-098
CLIENT: THOMPSON DESIGN ARCHITECT
PROJECT LOCATION: 1165 McCAIN AVENUE
LOCATION: SEE SITE PLAN **ELEVATION:** 100
DRILLER: GTS **LOGGED BY:** CMA
DRILLING METHOD: CME-55 **DATE:** 7/15/21
DEPTH TO - WATER> INITIAL: ▽ No. GW **AFTER 24 HOURS:** ▼ No. GW **CAVING>** C

Depth (feet)	Description	Graphic	Sample No.	Blow Counts	% < #200
0	Brown, Dry, poorly graded sand with silt with traces of rock		2-0		9.5
	Brown, Dry, poorly graded sand		2-1	3 3 4	2.7
5	Brown, Dry, granualr, poorly graded sand		2-2	3 4 5	2.3
10	Brown, Dry, poorly graded sand with silt and gravel		2-3	4 6 6	11.7
15	Boring terminated at 15 ft. Brown, Dry, poorly graded sand with silt with traces of rock		2-4	4 7 9	5.5
20					
25					
30					
35					

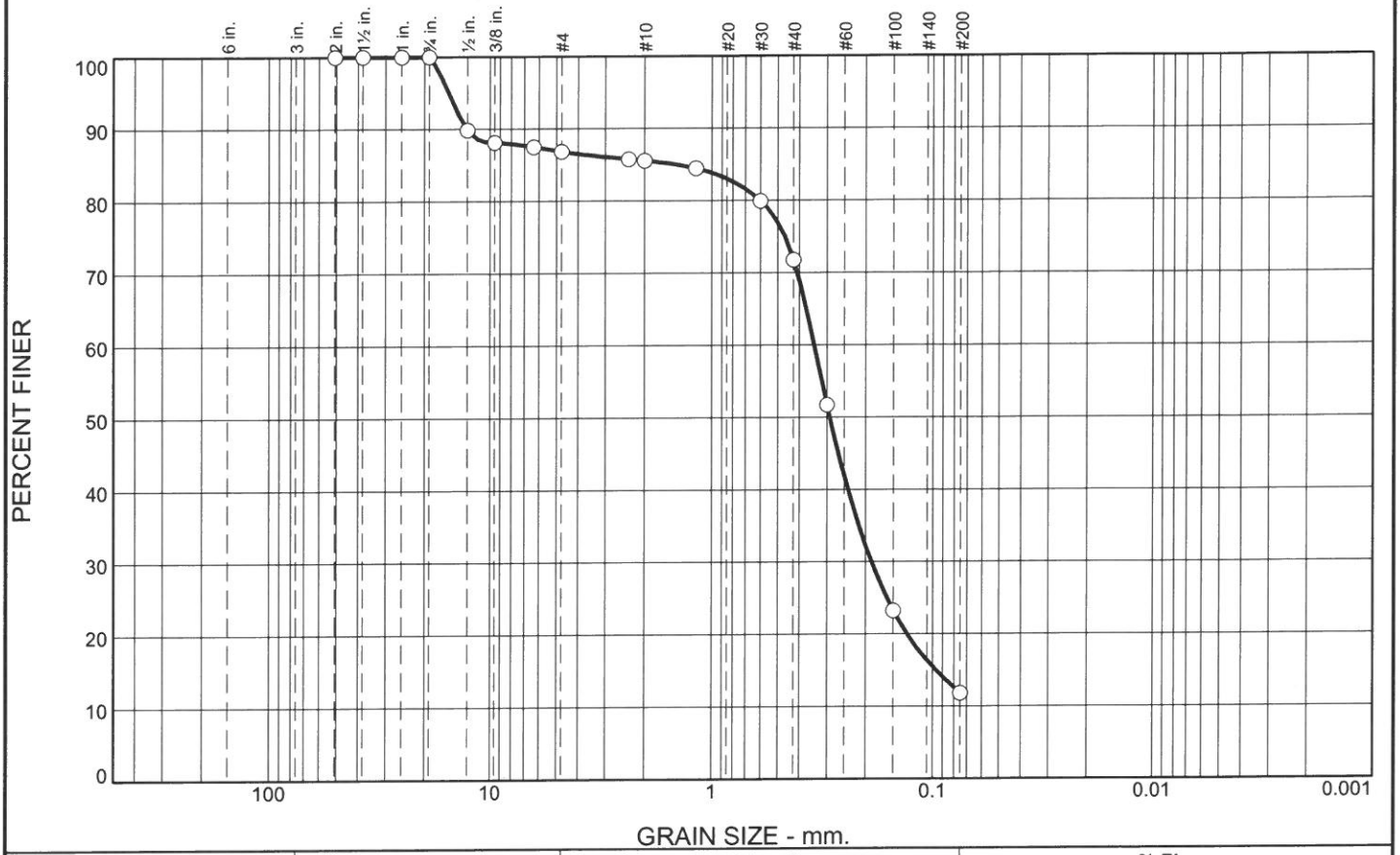
TEST RESULTS
Plastic Limit ⊢——⊣ Liquid Limit
Water Content - ●
Penetration - ▨
10 20 30 40 50

This information pertains only to this boring and should not be interpreted as being indicitive of the site.

GEOTECHNICAL TESTING SERVICES
1044 E. 21st STREET
YUMA, AZ 85365
Ph. (928) 329-4695 • Fax (928) 329-4782

APPENDIX B

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	13.2	1.2	13.9	59.9	11.8	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
1.5"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	89.9		
3/8"	88.1		
1/4"	87.5		
#4	86.8		
#8	85.8		
#10	85.6		
#16	84.5		
#30	79.9		
#40	71.7		
#50	51.7		
#100	23.2		
#200	11.8		

* (no specification provided)

Material Description

poorly graded sand with silt

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 12.7939 D_{85}= 1.4472 D_{60}= 0.3432
D_{50}= 0.2915 D_{30}= 0.1882 D_{15}= 0.0965
D_{10}= C_u= C_c=

Classification

USCS= SP-SM AASHTO= A-2-4(0)

Remarks

Source of Sample: 1 **Depth:** 0
Sample Number: 1-0

Date: 7/15/21

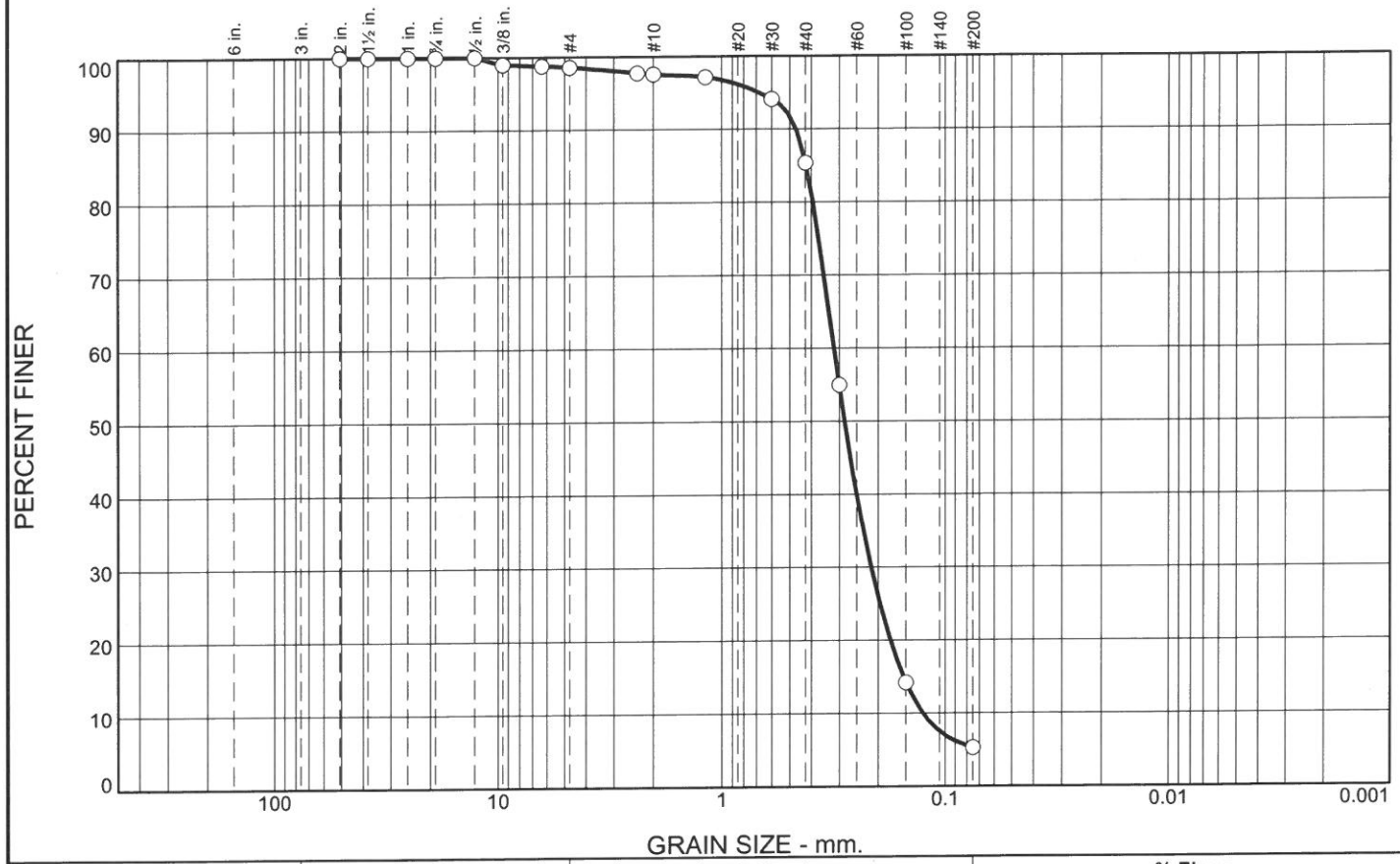
GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION

Project No: 21-098 **Figure** B-1

Tested By: GTS **Checked By:** GTS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.4	1.0	12.2	80.1	5.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
1.5"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	99.0		
1/4"	98.8		
#4	98.6		
#8	97.8		
#10	97.6		
#16	97.2		
#30	94.1		
#40	85.4		
#50	55.0		
#100	14.2		
#200	5.3		

* (no specification provided)

Material Description

poorly graded sand with silt

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.4694 D_{85}= 0.4222 D_{60}= 0.3164
D_{50}= 0.2837 D_{30}= 0.2150 D_{15}= 0.1539
D_{10}= 0.1256 C_u= 2.52 C_c= 1.16

Classification

USCS= SP-SM AASHTO= A-3

Remarks

Source of Sample: 1 **Depth:** 2.5
Sample Number: 1-1

Date: 7/15/21

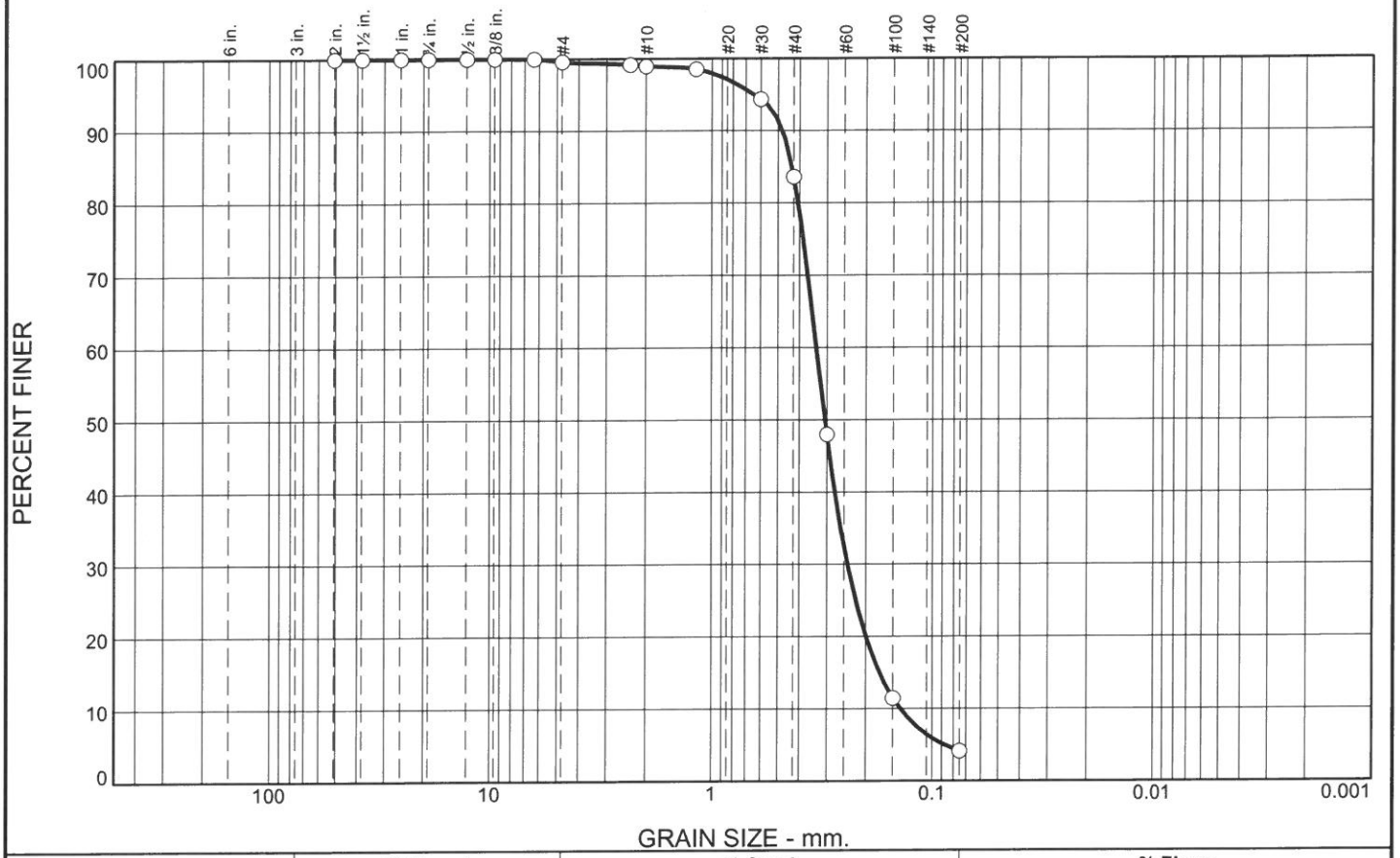
GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION

Project No: 21-098 **Figure** B-2

Tested By: GTS **Checked By:** GTS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.4	0.6	15.4	79.5	4.1	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
1.5"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	100.0		
1/4"	100.0		
#4	99.6		
#8	99.2		
#10	99.0		
#16	98.5		
#30	94.3		
#40	83.6		
#50	48.0		
#100	11.5		
#200	4.1		

* (no specification provided)

Material Description

poorly graded sand

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.4787 D_{85}= 0.4335 D_{60}= 0.3352
D_{50}= 0.3060 D_{30}= 0.2412 D_{15}= 0.1732
D_{10}= 0.1390 C_u= 2.41 C_c= 1.25

Classification

USCS= SP AASHTO= A-3

Remarks

Source of Sample: 1 **Depth:** 5.0
Sample Number: 1-2

Date: 7/15/21

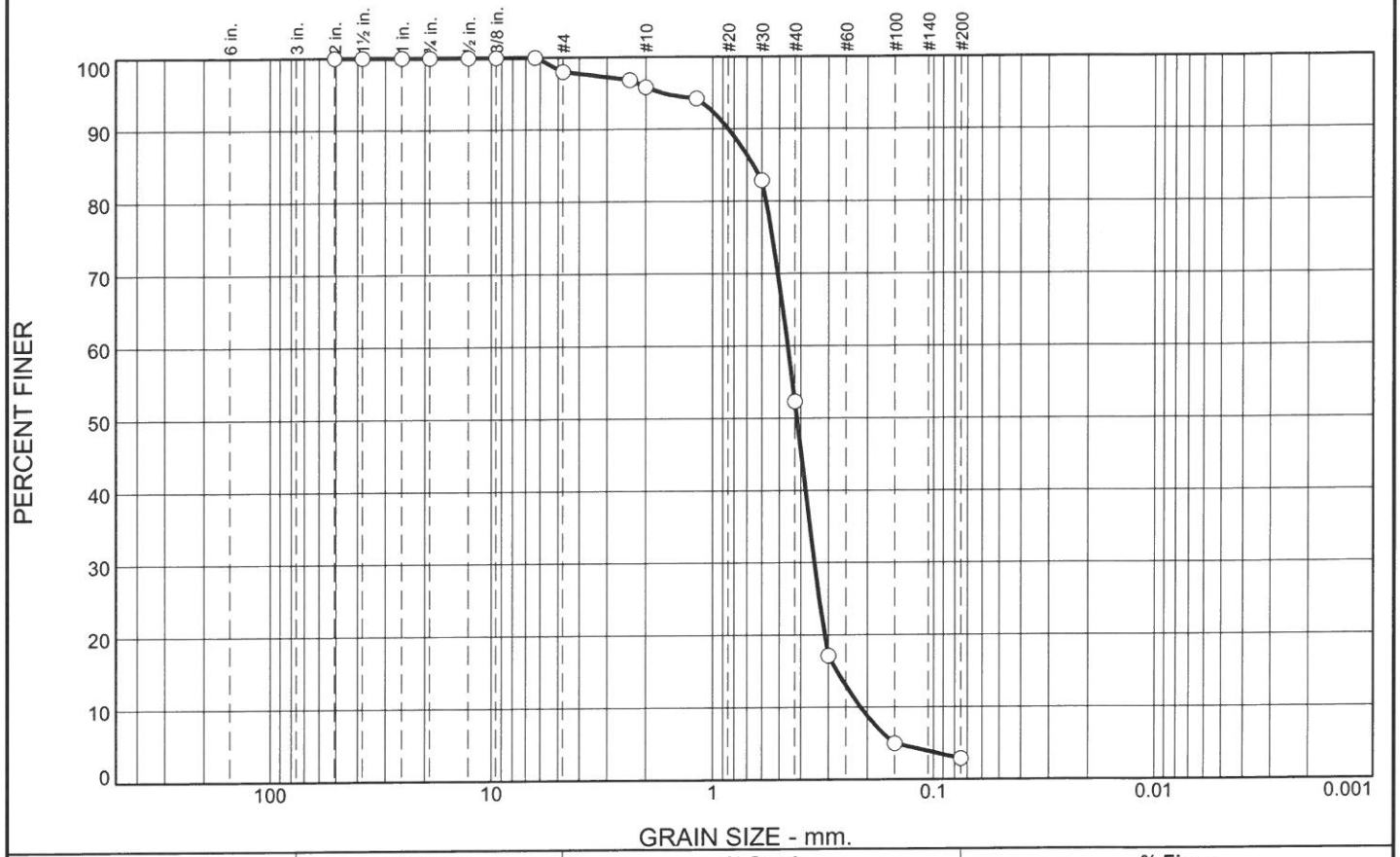
GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION

Project No: 21-098 **Figure** B-3

Tested By: GTS **Checked By:** GTS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.0	2.2	43.5	49.4	2.9	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)

* (no specification provided)

Material Description

poorly graded sand

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.8477 D_{85}= 0.6560 D_{60}= 0.4572
D_{50}= 0.4162 D_{30}= 0.3462 D_{15}= 0.2745
D_{10}= 0.2146 C_u= 2.13 C_c= 1.22

Classification

USCS= SP AASHTO= A-3

Remarks

Source of Sample: 1 **Depth:** 10
Sample Number: 1-3

Date: 7/15/21

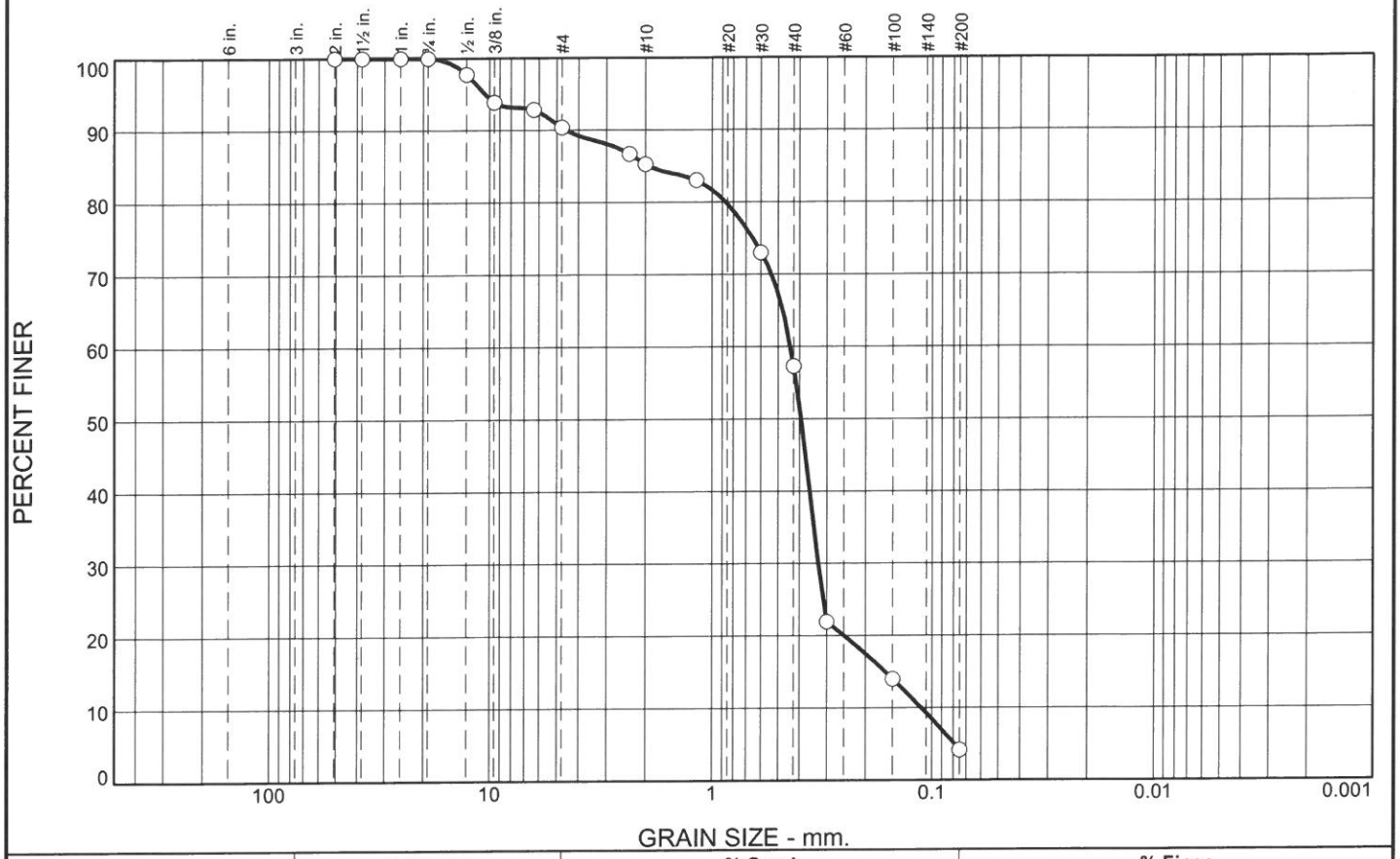
GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION

Project No: 21-098 **Figure** B-4

Tested By: GTS **Checked By:** GTS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	9.6	5.1	28.0	53.1	4.2	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
1.5"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	97.8		
3/8"	93.9		
1/4"	92.8		
#4	90.4		
#8	86.7		
#10	85.3		
#16	83.0		
#30	73.0		
#40	57.3		
#50	21.9		
#100	14.0		
#200	4.2		

* (no specification provided)

Material Description

poorly graded sand

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 4.5143 D_{85}= 1.9190 D_{60}= 0.4398
D_{50}= 0.3935 D_{30}= 0.3272 D_{15}= 0.1626
D_{10}= 0.1115 C_u= 3.95 C_c= 2.18

Classification

USCS= SP AASHTO= A-3

Remarks

Source of Sample: 1 **Depth:** 15
Sample Number: 1-4

Date: 7/15/21

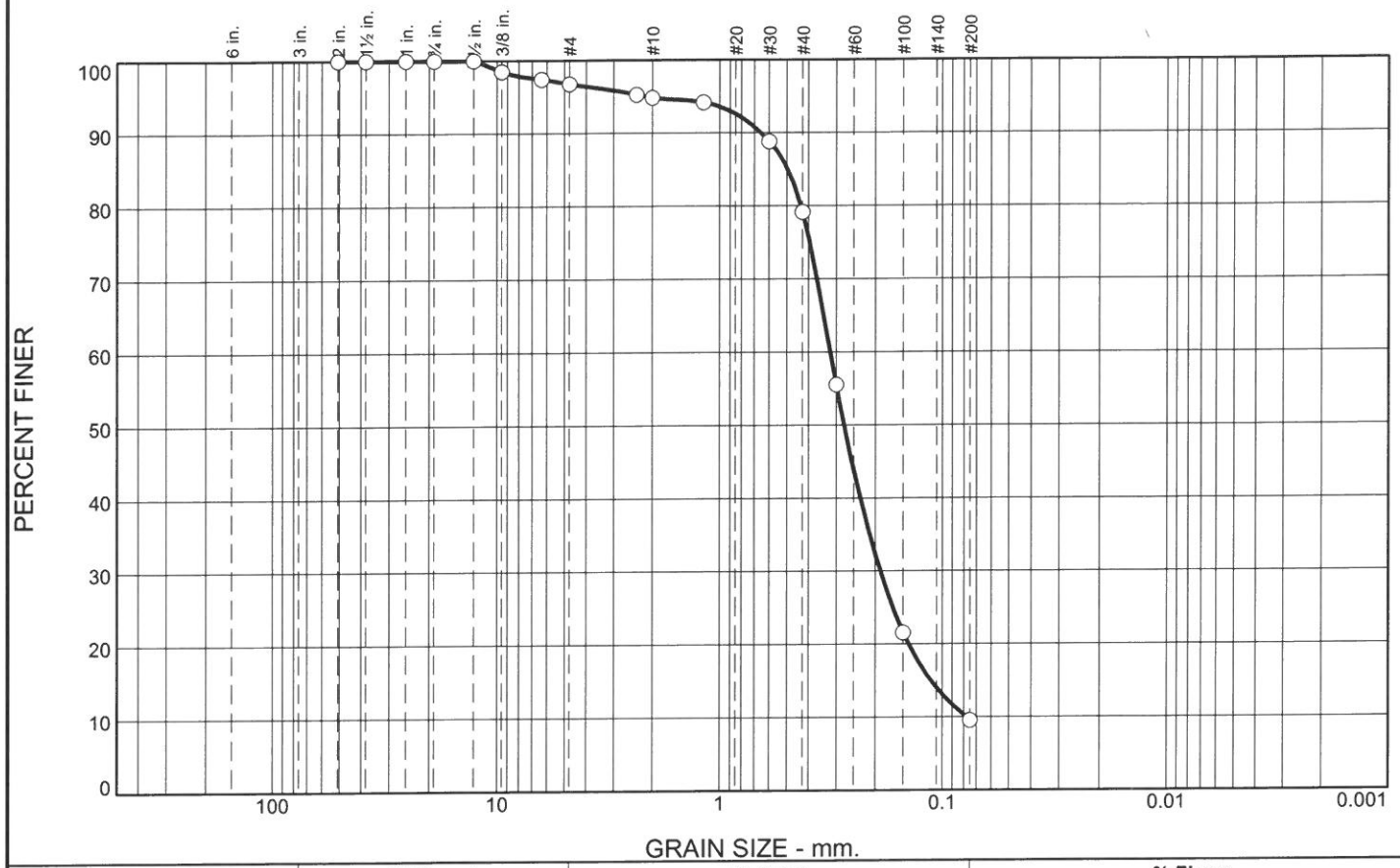
GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION

Project No: 21-098 **Figure** B-5

Tested By: GTS **Checked By:** GTS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	3.2	2.0	15.6	69.7	9.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
1.5"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	98.5		
1/4"	97.4		
#4	96.8		
#8	95.3		
#10	94.8		
#16	94.2		
#30	88.8		
#40	79.2		
#50	55.5		
#100	21.6		
#200	9.5		

* (no specification provided)

Material Description

poorly graded sand with silt

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.6535 D_{85}= 0.4950 D_{60}= 0.3192
D_{50}= 0.2766 D_{30}= 0.1901 D_{15}= 0.1125
D_{10}= 0.0781 C_u= 4.09 C_c= 1.45

Classification

USCS= SP-SM AASHTO= A-3

Remarks

Source of Sample: 2 **Depth:** 0
Sample Number: 2-0

Date: 7/15/21

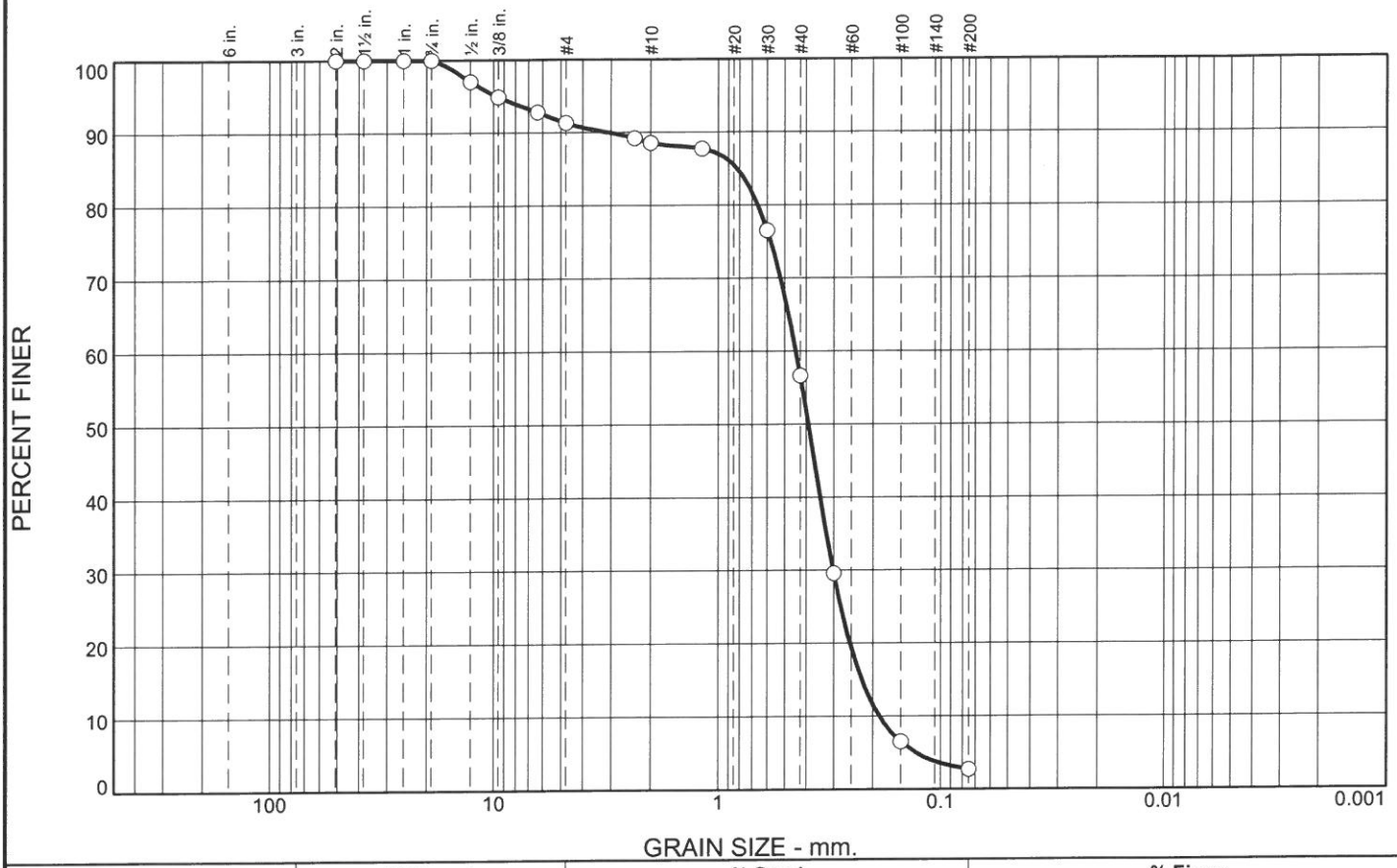
GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION

Project No: 21-098 **Figure** B-6

Tested By: GTS **Checked By:** GTS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	8.7	2.7	32.0	53.9	2.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
1.5"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	97.0		
3/8"	94.9		
1/4"	92.8		
#4	91.3		
#8	89.2		
#10	88.6		
#16	87.7		
#30	76.5		
#40	56.6		
#50	29.6		
#100	6.5		
#200	2.7		

* (no specification provided)

Material Description

poorly graded sand

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 3.0620 D_{85}= 0.8215 D_{60}= 0.4452
D_{50}= 0.3902 D_{30}= 0.3019 D_{15}= 0.2243
D_{10}= 0.1872 C_u= 2.38 C_c= 1.09

Classification

USCS= SP AASHTO= A-3

Remarks

Source of Sample: 2 **Depth:** 2.5
Sample Number: 2-1

Date: 7/15/21

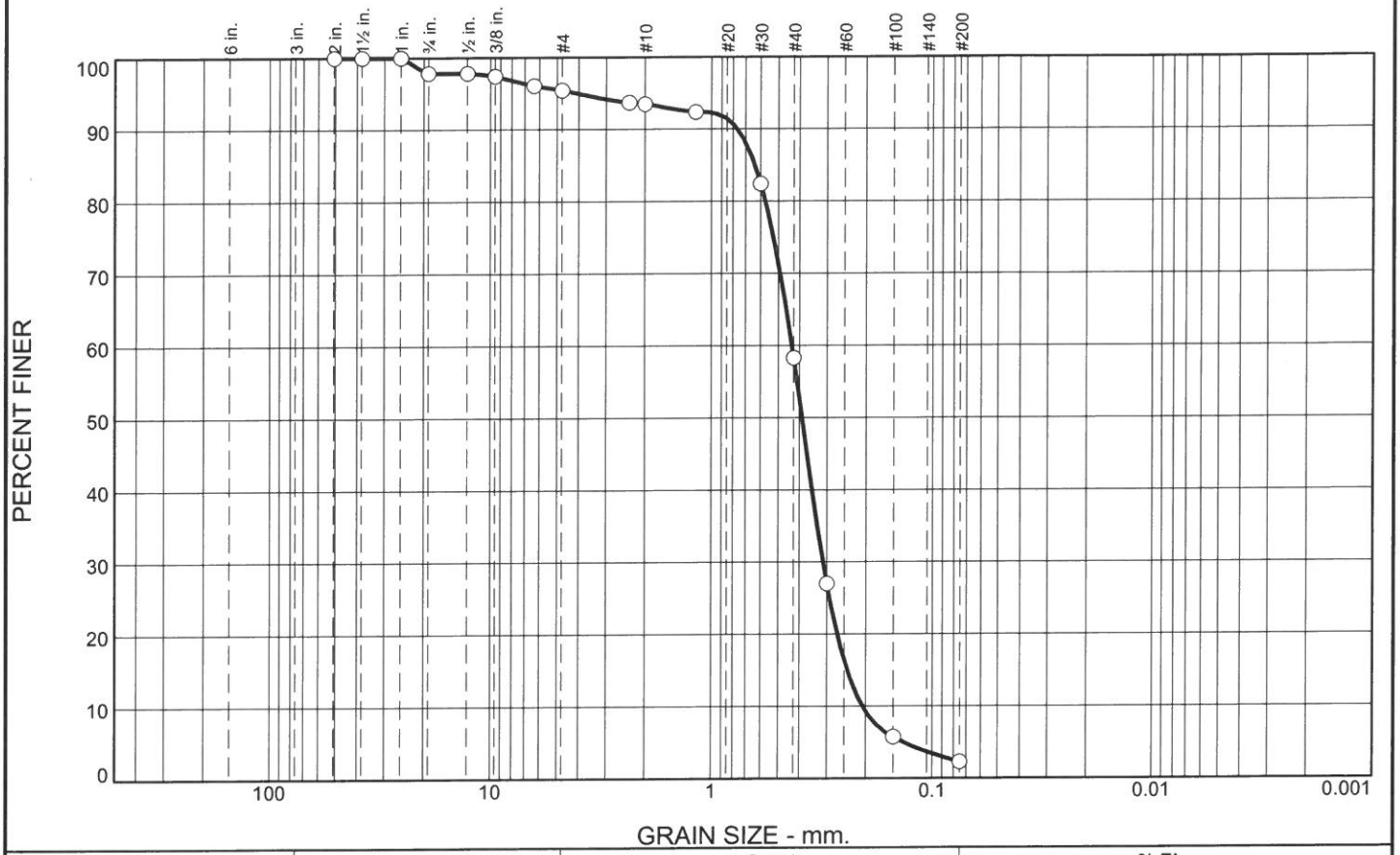
GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION

Project No: 21-098 **Figure** B-7

Tested By: GTS **Checked By:** GTS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	2.2	2.4	1.9	35.2	56.0	2.3	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
1.5"	100.0		
1"	100.0		
3/4"	97.8		
1/2"	97.8		
3/8"	97.4		
1/4"	96.1		
#4	95.4		
#8	93.7		
#10	93.5		
#16	92.4		
#30	82.4		
#40	58.3		
#50	27.0		
#100	5.7		
#200	2.3		

* (no specification provided)

Material Description

poorly graded sand

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 0.7640 D_{85}= 0.6375 D_{60}= 0.4333
D_{50}= 0.3886 D_{30}= 0.3118 D_{15}= 0.2425
D_{10}= 0.2071 C_u= 2.09 C_c= 1.08

Classification

USCS= SP AASHTO= A-3

Remarks

Source of Sample: 2 **Depth:** 5.0
Sample Number: 2-2

Date: 7/15/21

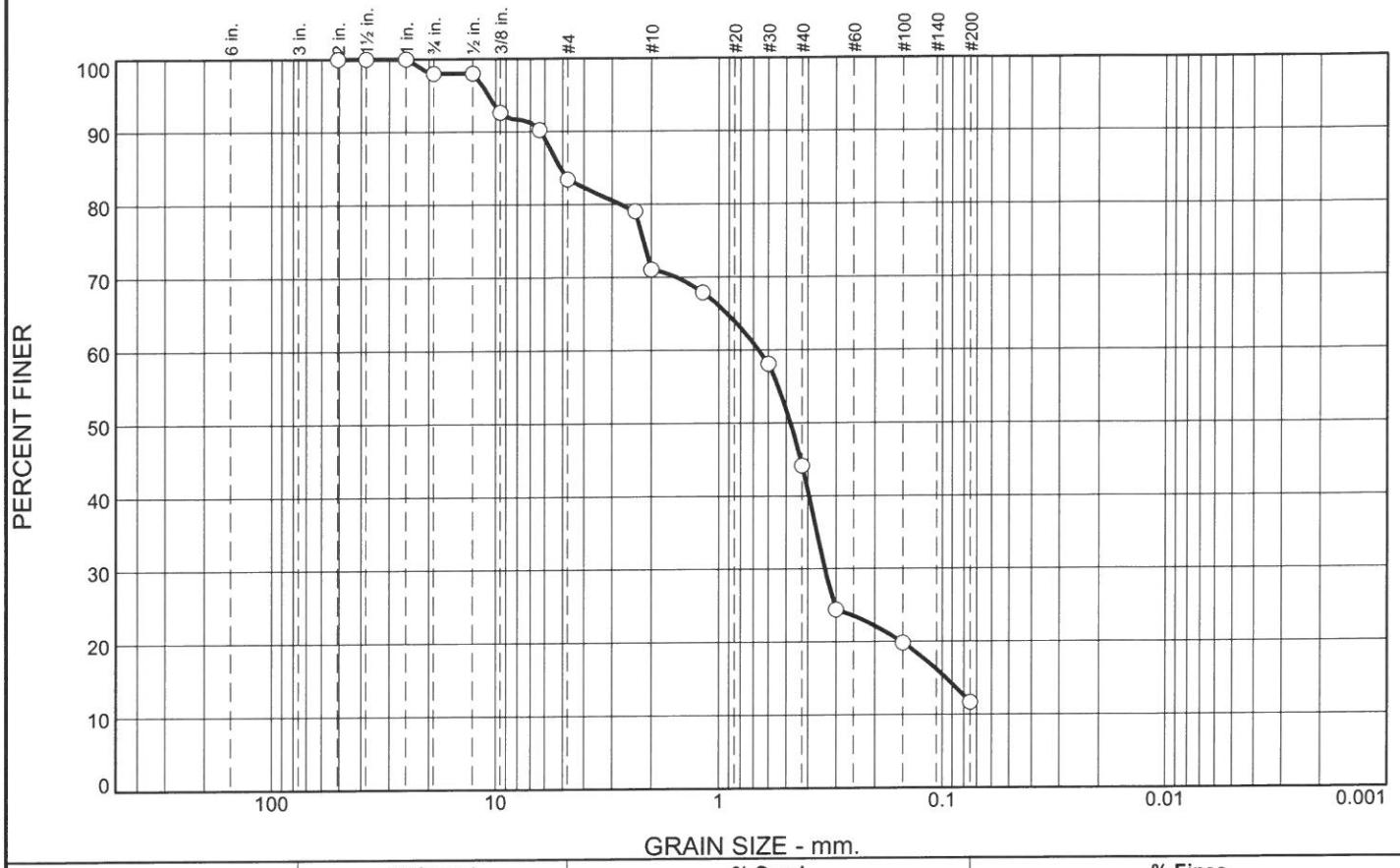
GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION

Project No: 21-098 **Figure** B-8

Tested By: GTS **Checked By:** GTS

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	2.0	14.6	12.3	26.9	32.5	11.7	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
1.5"	100.0		
1"	100.0		
3/4"	98.0		
1/2"	98.0		
3/8"	92.6		
1/4"	90.2		
#4	83.4		
#8	79.1		
#10	71.1		
#16	67.9		
#30	58.1		
#40	44.2		
#50	24.4		
#100	19.8		
#200	11.7		

* (no specification provided)

Material Description

poorly graded sand with silt and gravel

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 6.2687 D_{85}= 5.1273 D_{60}= 0.6641
D_{50}= 0.4787 D_{30}= 0.3352 D_{15}= 0.0961
D_{10}= C_u= C_c=

Classification

USCS= SP-SM AASHTO= A-1-b

Remarks

Source of Sample: 2 **Depth:** 10
Sample Number: 2-3

Date: 7/15/21

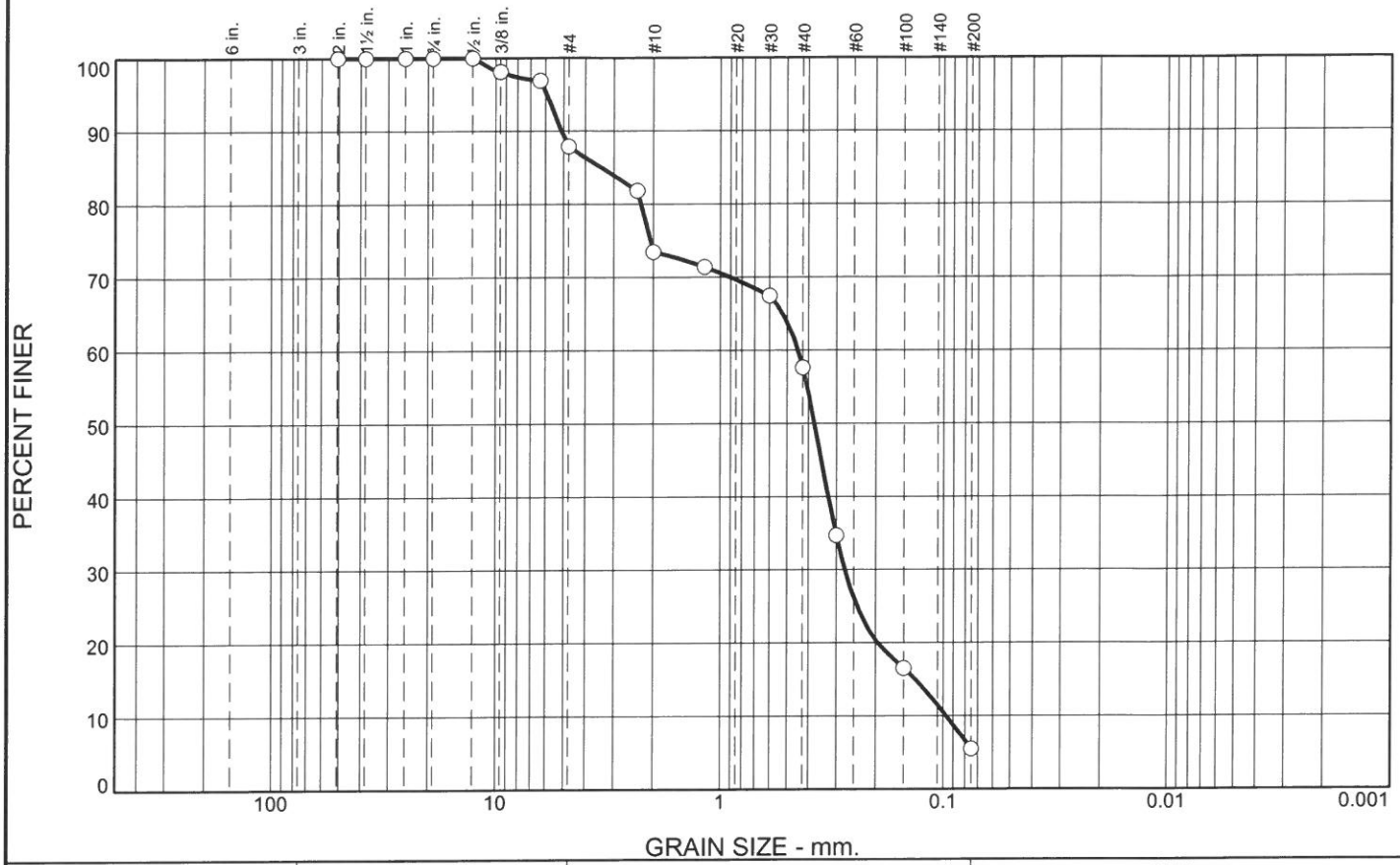
GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION

Project No: 21-098 **Figure** B-9

Tested By: gts **Checked By:** gts

Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	12.1	14.4	15.9	52.1	5.5	

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
2"	100.0		
1.5"	100.0		
1"	100.0		
3/4"	100.0		
1/2"	100.0		
3/8"	98.1		
1/4"	96.9		
#4	87.9		
#8	81.8		
#10	73.5		
#16	71.4		
#30	67.5		
#40	57.6		
#50	34.7		
#100	16.5		
#200	5.5		

* (no specification provided)

Material Description

poorly graded sand with silt

Atterberg Limits

PL= NP LL= NV PI= NP

Coefficients

D_{90}= 5.1221 D_{85}= 3.3974 D_{60}= 0.4467
D_{50}= 0.3753 D_{30}= 0.2746 D_{15}= 0.1334
D_{10}= 0.0970 C_u= 4.61 C_c= 1.74

Classification

USCS= SP-SM AASHTO= A-3

Remarks

Source of Sample: 2 **Depth:** 15
Sample Number: 2-4

Date: 7/15/21

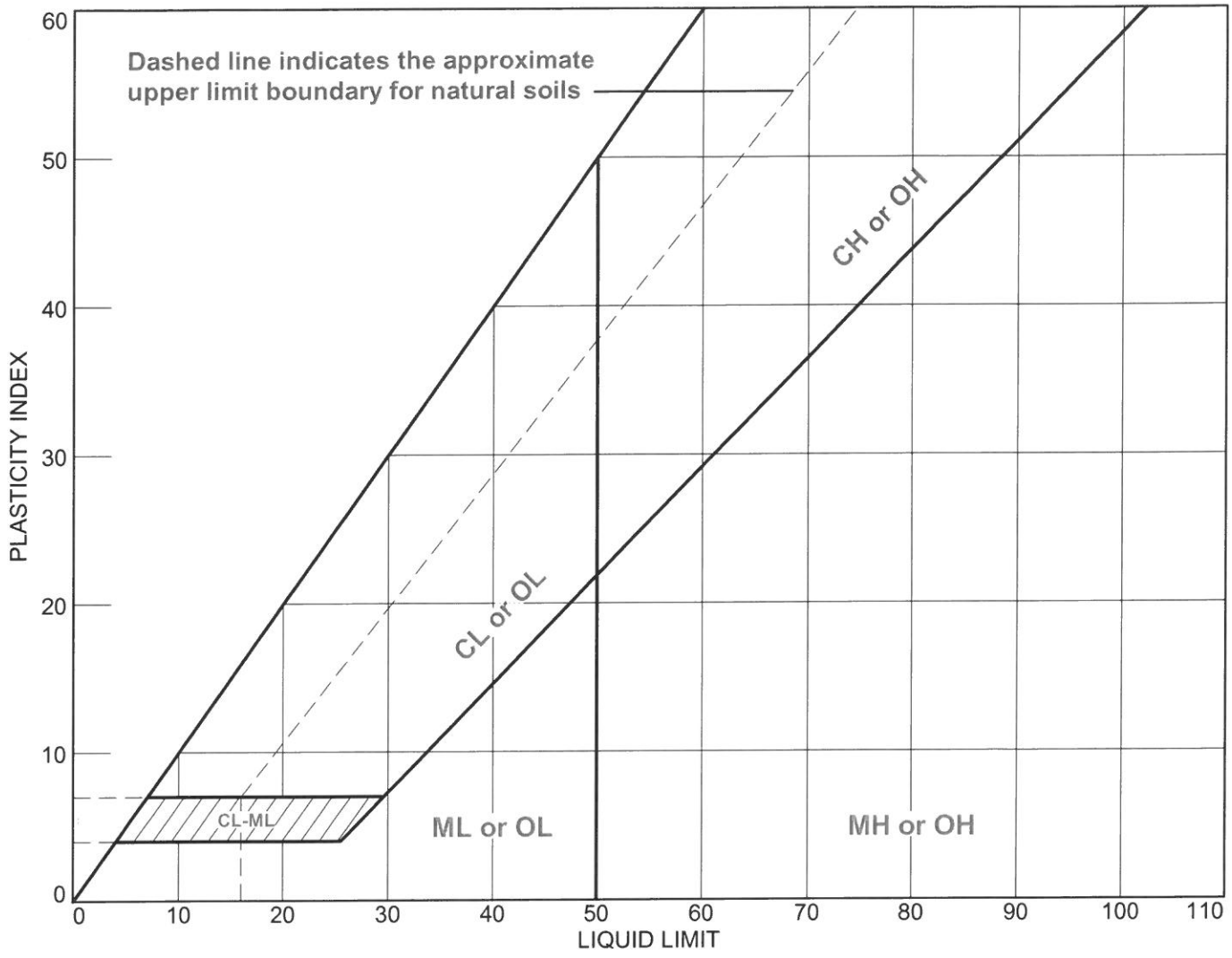
GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION

Project No: 21-098 **Figure** B-10

Tested By: gts **Checked By:** gts

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA

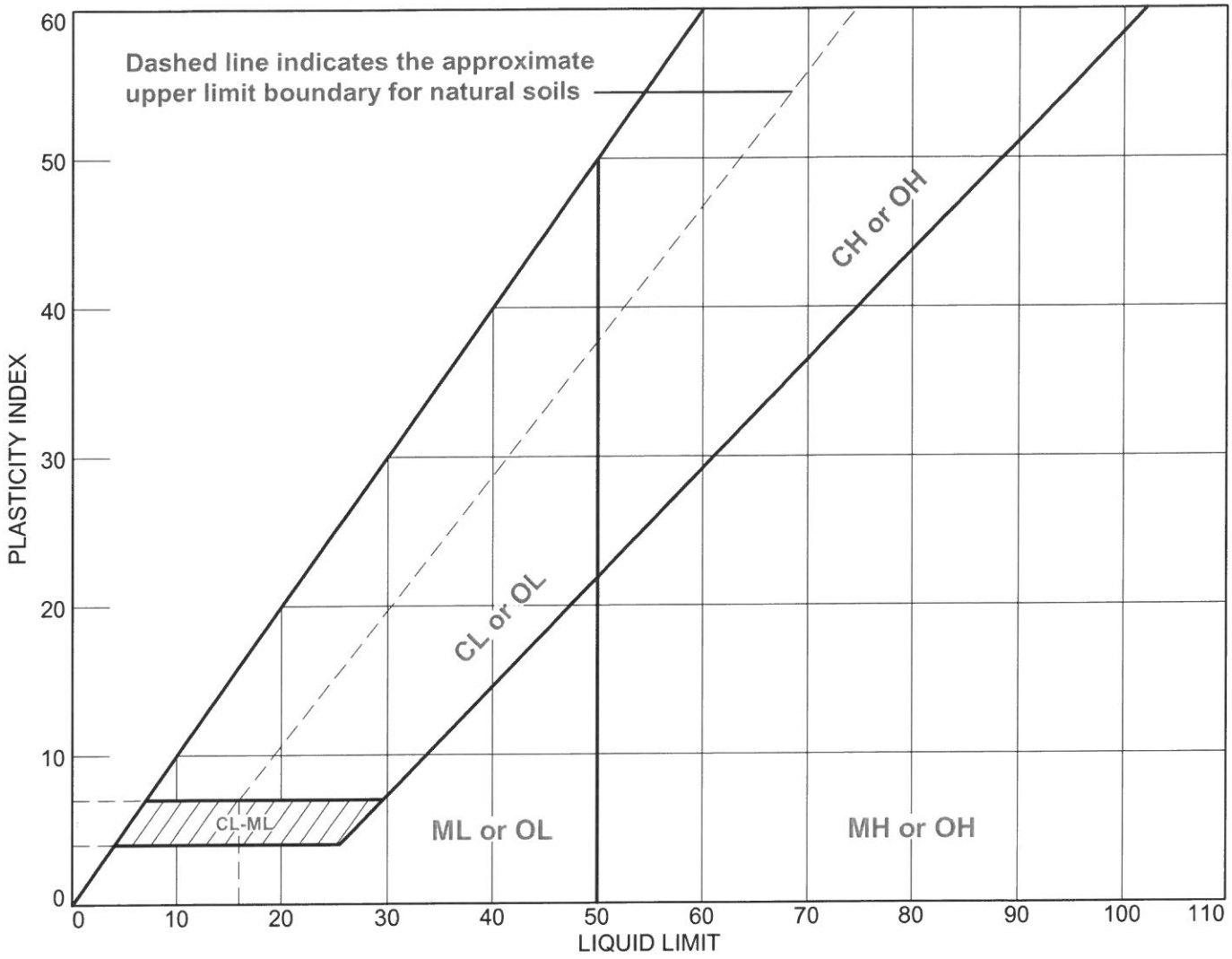
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	1	1-0	0	.9	NP	NV	NP	SP-SM
■	1	1-1	2.5	1.0	NP	NV	NP	SP-SM
▲	1	1-2	5.0	1.1	NP	NV	NP	SP
◆	1	1-3	10	1.6	NP	NV	NP	SP
▼	1	1-4	15	1.5	NP	NV	NP	SP

GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION
Project No.: 21-098 **Figure** B-11

Tested By: GTS **Checked By:** GTS

LIQUID AND PLASTIC LIMITS TEST REPORT



SOIL DATA

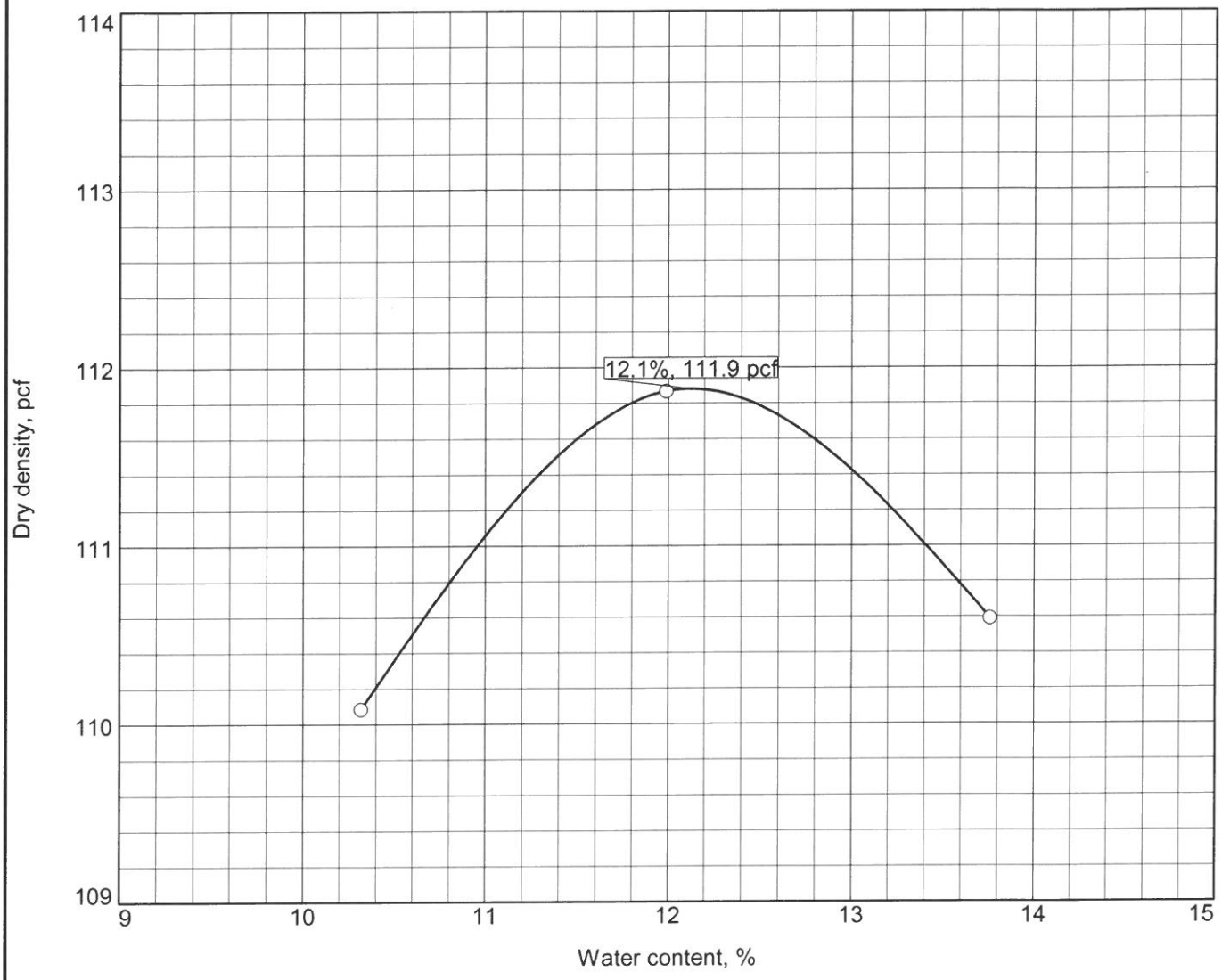
SYMBOL	SOURCE	SAMPLE NO.	DEPTH	NATURAL WATER CONTENT (%)	PLASTIC LIMIT (%)	LIQUID LIMIT (%)	PLASTICITY INDEX (%)	USCS
●	2	2-0	0	.7	NP	NV	NP	SP-SM
■	2	2-1	2.5	1.2	NP	NV	NP	SP
▲	2	2-2	5.0	.8	NP	NV	NP	SP
◆	2	2-3	10	1.4	NP	NV	NP	SP-SM
▼	2	2-4	15	2.1	NP	NV	NP	SP-SM

GEOTECHNICAL TESTING SERVICES
Yuma, Arizona

Client: THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION
Project No.: 21-098 **Figure** B-12

Tested By: ● GTS ■ GTS ▲ GTS ◆ gts **Checked By:** GTS

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
0	SP-SM	A-3	.7		NV	NP	3.2	9.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 111.9 pcf Optimum moisture = 12.1 %	poorly graded sand with silt

Project No. 21-098 **Client:** THOMPSON DESIGN ARCHITECT
Project: SAN LUIS FLEET MANAGEMENT BUILDING EXPANSION

○ **Source of Sample:** 2 **Sample Number:** 2-0

Remarks:

GEOTECHNICAL TESTING SERVICES

Yuma, Arizona

Figure B-13

Tested By: GTS **Checked By:** GTS

SECTION 02280

TERMITE TREATMENT

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
1. Pretreatment to provide chemical barrier to protect building and contents against attack by subterranean termites.

1.02 QUALITY ASSURANCE

A. Applicator Qualifications: Registered applicator with 5 years experience and licensed by Arizona Structural Pest Control commission.

B. Regulatory Requirements: Chemicals shall be approved for use and registered by Environmental Protection Agency (EPA) and the Office of State Chemist.

1.03 SUBMITTALS

A. Upon completion of soil treatment, and as a condition of final acceptance, provide Owner with written unlimited warranty providing:
1. Application was made at concentration, rate, and method in compliance with Specifications contained herein.
2. Warrants effectiveness of the soil treatment against subterranean termite infestation for a period of not less than five (5) years from acceptance and completion date of Project.

B. Upon evidence of subterranean termite activity within warranty period, re-treat area under warranty sufficient to prevent termites from attacking building or its contents during remainder of initial warranty period.

PART 2PRODUCTS

2.01 MATERIALS

A. Termite Treatment: Apply the following chemicals as a water emulsion at manufacturers recommended concentrations and volumes:
1. Dragnet FT
2. Cyren TC
3. Prevail FT
4. MasterLine TC
5. FMC Corporation - Baseline PreTreat

PART 3EXECUTION

3.01 APPLICATION-TERMITE CONTROL

A. Time of Application:
1. Notify Architect for opportunity to be present during application, at least 24 hours prior to application of materials. If project is a school, notify Principal

minimum 72 hours in advance of application.

2. Apply chemical treatment during normal working hours in order to be subject to inspection.
3. Do not treat soil and fill areas that are excessively wet or after heavy rains to avoid surface flow of toxicant.

B. Application: In accordance with Manufacturer's recommendations, local codes and U.S. Department of Agriculture Forest Service Home and Garden Bulletin 64, revised 1986.

1. Provide applicator trucks with approved measuring flow meters.
2. Apply chemicals on soils and compacted ABC fill materials under entire subsurfaces of building floor slabs, and sidewalk and driveway slabs abutting buildings within five feet of exterior walls, in minimum quantities stated on label.

   At retaining foundation walls of structures, apply from finished grade to top of footings in a strip one foot wide on exterior side of each elevation as follows: near level of top of footings before any backfill is placed, as each one foot lift of backfill is completed and just below finished grade.
3. Apply a strip one foot wide along interior and exterior sides of foundation stem walls.
4. Provide treatment on both sides of interior partitions were slab has been thickened or at stem foundation walls.
5. Treat expansion and cold joints, and other areas where concrete slabs will be penetrated by plumbing mechanical, electrical or other construction features.
6. After completion of finish grading and landscaping, treat one foot wide strip by minimum 18" deep where soil abuts foundations. Certify to Architect that this has been completed.
7. Where a vapor barrier is installed under the slab, the termite treatment application shall be applied below the vapor barrier.

C. Protection: Do not disturb aggregate base course and treated soil between application of poison and pouring of concrete.

1. Re-treat any soil or compacted fill that is disturbed after soil poisoning, such as plumbing and electrical changes or omissions.
2. Should rainy weather occur prior to pouring concrete slab over treated ABC, retreat the complete area at the discretion of Architect, and at no additional cost to Owner. Architect will be the sole judge to determine if rain water (in sufficient quantities) has leached chemicals into the ground, flooded chemicals to low areas in subbase, or flooded chemicals out of stem wall openings.

END OF SECTION

San Luis Fleet Maintenance Building Expansion Project **Bid Opening: 3:00 PM, 02/17/2022**

Bid Tabulation

Contractor Name	Base Bid	Alt #1	Alt #2	Alt #3	Total Bid Amount
Merrill Development LLC	$ 2,423,000.00	$ 150,849.00	$ 64,180.00	$ 689.00	$ 2,638,718.00
Pilkington Contracting Co., Inc. (PCC)	$ 2,694,744.00	$ 209,710.00	$ 81,336.00	$ 918.00	$ 2,986,708.00
Yuma Valley Contractor, Inc. (YVC)	$ 2,821,191.53	$ 76,720.00	$ 60,480.00	$ 33,092.64	$ 2,991,484.17
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -

thompson
design architects
pc

MARCH 2, 2022
JAMES R. EINWAECHTER, P.E.
PUBLIC WORKS DEPARTMENT
CITY OF SAN LUIS

RE: SAN LUIS FLEET MAINTENANCE BUILDING EXPANSION – BID REVIEW AND RECOMMENDATION

Mr. Einwaechter:

The public bid opening for the City of San Luis Fleet Maintenance Building Expansion was held February 17, 2022 at 2:00 p.m. at City Hall. Three bids were received from the following bidders:

Merrill Development Inc.
Pilkington Construction Co.
Yuma Valley Contractors Inc.

A bid tabulation is attached to this letter.

The bid received from Merrill Development was the lowest bid.
I have conducted a review of the submitted bid documentation requested in the bid advertisement. The contractor acknowledges receipt of all addenda issued and bid alternate items.

After review of the Merrill Development bid documents I find the bid responsive and complete. I recommend the Owner proceed to award the construction contract in the amount of:

$ 2,638,718.00 (includes all alternate bid items)

Although the resulting bids are higher than expected this is indicative of the surging and volatile construction market we are currently experiencing. In some construction trade sectors the construction material markets have surged over 270% in the past 12 months. Labor costs have increased over 70% in some sectors. Without knowledge of forecasted conditions, it is difficult to predict when construction costs will decrease or if costs will continue to increase for the foreseeable future.

Please let me know any questions.

Sincerely,

675 west 16th street
yuma,arizona 85364
tel (928) 343 1694
fax (928) 343 9579

Christopher Thompson
Principal Architect

San Luis Fleet Maintenance Building Expansion Project **Bid Opening: 3:00 PM, 02/17/2022**

Bid Tabulation

Contractor Name	Base Bid	Alt #1	Alt #2	Alt #3	Total Bid Amount
Merrill	$ 2,423,000.00	$ 150,849.00	$ 64,180.00	$ 689.00	$ 2,638,718.00
PCC	$ 2,694,744.00	$ 209,710.00	$ 81,336.00	$ 918.00	$ 2,986,708.00
YVC	$ 2,821,191.53	$ 76,720.00	$ 60,480.00	$ 33,092.64	$ 2,991,484.17

CITY OF SAN LUIS

CONSTRUCTION CONTRACT

AGREEMENT:

On March 9, 2022 the City of San Luis City Council ("CITY") authorized the award of a construction contract for the City of San Luis Fleet Services Building Expansion Project to Merrill Development LLC ("CONTRACTOR") doing business as a corporation located in the City of San Luis, Arizona.

For the consideration of the payments and agreements in this contract, to be made and performed by the CITY, the CONTRACTOR agrees with the CITY to commence and complete the project as follows:

Article 1: Contract Documents

The Contract Documents consist of this CITY-CONTRACTOR Agreement, the Conditions of the Contract (General, Supplemental and other Conditions), the Drawings, the Project Manual, all Addenda issued prior to and all modifications issued after execution of the Contract, and all applicable laws, ordinances and regulations. A modification is (1) a written amendment to the contract signed by both parties, (2) a Change Order, (3) a written interpretation issued by the CITY or (4) a written order for a minor change in the WORK issued by the CITY. While this Contract is awarded without bid, the Contract Documents include Bidding Documents such as the Instructions to Bidders, sample forms, the CONTRACTOR's Bid or portions of addenda relating to any of these, or any other documents, specifically enumerated in the CITY-CONTRACTOR Agreement.

The Contract Documents form the Contract for Construction. This Contract represents the entire and integrated agreement between the parties and supersedes all prior negotiations, representations, or Agreements, either written or oral. The Contract may be amended or modified.

In interpreting the Contract, in the event of discrepancies or conflicts:

1) the Special Conditions govern over the Plans, and
2) the Plans govern over the Technical Specifications.
3) the Plans drawn with the largest scale govern, and
4) figured dimensions govern over scaled dimensions.

Article 2: The WORK

The CONTRACTOR will perform all the WORK required under this agreement as described below:

The work is located within the limits of the City of San Luis, Arizona. The work consists of, but

is not limited to, a new approximately1,500 square foot office building, remodel of an existing approximately 2,000 square foot pre-engineered metal building structure, and erection and installation of a new pre-engineered metal building. The pre-engineered metal buildings (new and existing) are provided by the owner. Work will be performed per specifications in the Contract Documents and Project Plans.

The City Engineer (ENGINEER) is the administrator of this Contract, and is the interpreter of the Contract Documents and the judge of the CONTRACTOR's performance of the WORK. All reference to the "City Engineer" in these documents includes the City Engineer, and authorized representatives.

Article 3: Time of Commencement and Completion

CONTRACTOR must begin work within 10 calendar days of the date established by the Notice to Proceed and, subject to modifications authorized by the City Engineer, complete WORK as specified.

The project shall be complete and in place within 450 calendar days from the date of Notice to Proceed

Article 4: Contract Sum

The CITY will pay the CONTRACTOR for performance of the WORK, subject to additions and deletions by Change Order, the sum of $2,638,718.00. .

Article 5: Progress Payments

The CONTRACTOR must apply to the City Engineer for progress payments. The CITY will make progress payments pursuant to A.R.S. §34-221 and with the City Engineer's approval of CONTRACTOR's application. Progress payments are subject to retainage amounts as deemed necessary by the City Engineer for incomplete WORK, unsettled claims, and other deficiencies.

Article 6: Final Payment

Upon the City Engineer's certification that the WORK has been completed and the Contract has been fully performed, all documentation, including the written concurrence of bonding agencies, if applicable, has been received, and the CITY has accepted the WORK, the CITY will make final payment. Final Payment and acceptance of the WORK will not relieve the CONTRACTOR of its obligation to warrant the WORK for a period of two years.

Article 7: General Conditions.

7.1. Definitions:

7.1.1 CITY. The word “CITY” as used in these documents refers to the City of San Luis, Arizona. The official representative of the CITY in these proceedings is the City

Administrator, City of San Luis, Arizona or authorized designee.

7.1.2 ENGINEER. The word "Engineer" means the City Engineer, the Public Works Director, or firm or person, and their properly authorized assistants and inspectors, designated by the CITY to prepare Plans and/or administer construction of the WORK.

7.1.3 CONTRACTOR. The word "CONTRACTOR," as used in the Project Manual or in the contract, means the person, firm or corporation with whom the contract is made by the CITY.

7.1.4 SUBCONTRACTOR. The word "Subcontractor" includes those having a direct contract with the CONTRACTOR and those who furnish material worked to a special design according to the Plans or Project Manual for this WORK but does not include those who merely furnish material not so worked.

7.1.5 PLANS. The word "Plans," as used in the Project Manual or in the Contract, means the official plans, working drawings or supplemental drawings or exact reproductions thereof, authorized by the City Council, City of San Luis, Arizona which show the locations, character, dimensions and details of the project and the WORK to be done and which are to be considered as a part of the contract, supplementary to the Project Manual.

7.2. Project Administration.

7.2.1 In conformance with Arizona Revised Statutes §42-5006 and the Arizona Department of Revenue criteria concerning construction project tax liabilities and, as a requirement of this Contract, the CONTRACTOR must provide to the City of San Luis one of the following documents:

(a) A copy of the **Tax Liability Bond** issued by the Arizona Department of Revenue, naming this specific project as being bonded.

(b) A current **Bond Exemption Certificate** issued by the Arizona Department of Revenue, naming this specific project as being exempt.

7.2.2 The Public Works Department will issue the project's **Notice To Proceed** and **Notice Of Completion** documentation.

7.2.3 The Contractor shall comply with the Arizona Pollutant Discharge Elimination System (AZPDES) storm water Phase II requirements. The cost of such compliance must be incorporated into the appropriate Bid Form line item cost(s) and no separate payment will be made for this compliance.

7.2.4 Prior to and as a prerequisite of the **Notice To Proceed** the CONTRACTOR shall provide the ENGINEER with five (5) copies of the following submittals for review and approval:

(a) Proposed project materials

(b) Construction schedule
(c) Schedule of Values for anticipated payment requests
(d) Safety plan
(e) Material Safety Data Sheets (MSDS)
(f) Traffic Control Plan
(g) Listing of after-hours/emergency contact personnel for the CONTRACTOR and subcontractor(s).
(h) Certificates of training for all workers who will be cutting, tapping, or handling asbestos cement pipe.
(i) Written designation of a "competent person", in accordance with the definition in 29 CFR Part 1926.650, if excavation is required. This person shall remain on the Project site during all construction activities associated with his/her field of competency.

Additionally, contractor shall submit certification that the competent person has successfully completed a minimum of eight (8) hours of OSHA training related to that field of competency

7.2.5 Contractor must submit all monthly estimates and final billing concurrently to the City's Engineer (copy), the Public Works Director (copy), and to the Finance Director (original), City of San Luis, for review and approval prior to payment.

7.2.6 Contractor is advised that the following sequence of events for issue of final payment by the City of San Luis is as follows:

(a) The **Contractor's Affidavit Regarding Settlement of Claims** is submitted to the City of San Luis Public Works Department.

(b) A copy of the **Affidavit** and **Consent of Surety** is sent by the CONTRACTOR to the CONTRACTOR's Bonding Surety with a request to release final contract payment to the CONTRACTOR.

(c) Once the Bonding Surety advises, in writing (**Consent of Surety)** to Public Works, that payment of final contract monies to the CONTRACTOR is approved, the City of San Luis Finance Department is requested to schedule the issue of the final payment.

7.2.7 In a coordinated effort with the ENGINEER's representative, the CONTRACTOR will be responsible for the preparation and furnishing of "As-Built" record drawings. The CONTRACTOR shall obtain one set of plans from the Public Works Department and record, in red colored pencil, all cases where actual field construction differs from WORK shown on plans. All concealed WORK and utility locations will be dimensioned. No separate payment will be made for this activity. The cost for same must be incorporated into the appropriate **Bid Form** line item cost.

7.2.8 The CONTRACTOR shall notify the ENGINEER immediately of any conditions

requiring changes to the plans.

7.2.9 After the construction is complete and the project's disturbed area is stabilized to at least 70% of natural background levels or responsibility of the project has been assumed by another operator, the Contractor must submit to ADEQ a Notice of Termination (NOT) to end participation in AZPDES program. A copy of the NOT must be provided to the ENGINEER.

7.3. Safety.

7.3.1 Occupational Safety and Health Act (OSHA) Standards for General Industry and Construction (Title 29, Code of Federal Regulations, Parts 1910 and 1926 as amended) and the City of San Luis's Environmental Health and Safety Regulations are applicable in this Contract.

7.3.2 Prior to the issuance of the project's **Notice to Proceed**, the CONTRACTOR, as defined in the beginning of these General Conditions, must submit an **Accident Prevention Plan** (**Safety Plan**) for the specific WORK to be undertaken, to the City of San Luis, for review and approval. This Plan must address all phases of construction to be undertaken, as called out in this Contract. The Plan must also address measures to control hazards associated with materials (MSDS), equipment, and safety inspections.

7.3.3 The CONTRACTOR must provide the name of a designated safety person for coordination during the life of the project.

7.3.4 The after-hours/emergency response sequence to be utilized for this project is**:**

The City of San Luis Public Works Department will respond to the site of the problem and stabilize the situation by:

(a) Erecting traffic control signs and barricades to safely divert traffic/motorists and/or pedestrians from the problem area.

(b) Contacting the Public Works Department to close any valves, as may be necessary.

(c) Contacting the Senior Engineering Technician / Inspector responsible for the project or if the Inspector is not available, contacting the Engineering Field Supervisor, to notify the CONTRACTOR of the need to respond to the project site.

(d) Commencing such remedial activities as may be necessary to stabilize the site and protect any adjacent infrastructures, until relieved by the CONTRACTOR.

7.3.5 The CONTRACTOR must keep the City of San Luis Police Department, Public Works Department, and Fire Department informed of all restrictions to traffic flow due to the construction operations.

7.3.6 The CONTRACTOR must protect both pedestrians and vehicular traffic at all times with properly positioned warning signs, devices and / or flaggers. All traffic control must be in accordance with the Manual of Uniform Traffic Control Devices and with applicable Arizona and local codes. The CONTRACTOR must submit a traffic control plan to the CITY for review and approval prior to the start of construction.

(a) The CONTRACTOR is responsible for the inspection of all traffic control installations used in conjunction with this project and shall inspect, at least twice daily, to ensure same conforms to the approved Traffic Control Plan. It is recommended that this inspection take place at the start and end of each workday, and approximately the same time on non-working days and at such times as felt such inspection may be required.

(b) The CONTRACTOR must provide the Public Works Department the name and telephone number of those persons responsible for these inspections and who are available for emergency after-hours call out.

(c) No separate payment will be made for the above activities. The cost for same must be incorporated into the appropriate **Bid Form** line item cost.

(d) All signs, barricades and warning devices utilized during this Project must:

1. Be installed in accordance with a plan that has been provided to the CITY by a firm or personnel certified in the area of construction traffic control by the American Traffic Safety Services Association (ATSSA) or the International Municipal Signal Association (IMSA) and said plan has been accepted by the CITY, and;

2. Be installed and maintained by a firm or personnel certified in the area of construction zone traffic control by either ATSSA or IMSA.

3. Be National Cooperative Highway Research Program (NCHRP) Report 350 compliant.

Upon request, the CONTRACTOR must furnish the CITY with documentation to verify that such certifications are current.

7.3.7 CONTRACTORS having questions concerning these regulations and the implications of same should contact the City of San Luis Public Works Department.

7.4. Provisions for Handling Emergencies.

7.4.1 It is possible that emergencies may arise during the progress of the WORK which may require special treatment or make advisable extra crew shifts to continue the WORK for twelve (12), eighteen (18), or even twenty-four (24) hours per day. These emergencies may be caused by damage or possible damage to nearby existing structures or property,

or by accidents. The CONTRACTOR must be prepared in case of such emergencies, to make all necessary repairs, and will promptly execute such WORK when required by the ENGINEER.

7.4.2 The after-hours/emergency response sequence to be utilized for this project is:

(a) Erecting traffic control signs and barricades to safely divert traffic, motorists and/or pedestrians from the problem area.

(b) Contacting the City of San Luis Public Works Department to close any valves as may be necessary.

(c) Contacting the Senior Engineering Technician / Inspector responsible for the project or if the Inspector is not available, contacting the Engineering Field Supervisor, to notify the CONTRACTOR of the need to respond to the project site.

(d) Commencing such remedial activities as may be necessary to stabilize the site and protect any adjacent infrastructures, until relieved by the CONTRACTOR.

7.5. Asbestos Cement Pipe.

7.5.1 All CONTRACTORS engaged by the City of San Luis, Arizona to undertake construction involving repair, modification, removal and/or disposal of asbestos cement (cement asbestos) pipe must comply with those worker training requirements stipulated in 29 CFR 1926.1101, the Asbestos NESHAP regulations contained in 40 CFR 61 and special waste management rules for friable A.C.M. contained within Arizona Administrative Code R18-8-301/306, as well as subsequent amendments to or superseding documents concerning the above regulations.

7.5.2 The CONTRACTOR shall remove and dispose of all waste or scrap A.C. pipe generated during the course of the project, unless specifically noted otherwise in the contract documents.

7.6. Delays.

7.6.1 If any delay is caused the CONTRACTOR by specific order of the ENGINEER to stop work or by failure of the CITY to provide the necessary right-of-way or site for installation, or by such unforeseen causes beyond the control of the CONTRACTOR, such delay will entitle the CONTRACTOR to an equivalent extension of time, except as otherwise provided hereinafter under **Suspension of WORK**. Provided, however, that when delay is caused by an order to suspend WORK given on account of climatic conditions which in the opinion of the ENGINEER could have been reasonably foreseen, the CONTRACTOR will not be entitled to any extension of time on account of such order.

7.6.2 Application for extension of time must be approved by the ENGINEER and must be accompanied by the formal consent of the sureties, but an extension of time, whether

with or without such consent, must not release the sureties from their obligations, which will remain in full force until the discharge of the Contract.

7.6.3 Standby time, if required, will be considered a delay to the project and, as such, will be addressed in accordance with the provisions of this section.

7.7. Suspension of WORK.

7.7.1 The CITY reserves the right to suspend the whole or any part of the WORK herein specified, if deemed in its interest to do so, without compensation to the CONTRACTOR for such suspension other than extending the time for completing the WORK as much as it may have been delayed by such suspension. No allowance by way of damages will be made for any such delay.

7.8. Project Manual and Plans.

7.8.1 The CONTRACTOR must keep on the WORK SITE a copy of the Project Manual and plans, and will at all times give the ENGINEER access thereto. Any drawings or plans listed in the Project Manual will be regarded as part of the Contract. Anything mentioned in the Project Manual and not shown on the Plans, or shown on the Plans and not mentioned in the Project Manual will be deemed as if shown as a part of this Contract. The ENGINEER may furnish from time to time such additional drawings, plans, profiles, and information, as he may consider necessary for the CONTRACTOR's guidance.

7.9. Lines and Grades.

7.9.1 All WORK under this Contract must be built in accordance with the lines and grades shown on the Plans and as given by the ENGINEER. The ENGINEER will furnish only the basic reference lines and bench marks from which the CONTRACTOR will establish such other points as he may need, except as otherwise specified herein. The protection and care of such references is the responsibility of the CONTRACTOR and any references lost or destroyed will be replaced only at the CONTRACTOR's expense.

7.9.2 The ENGINEER will perform construction staking as follows:

(a) Sewer lines: stake the centerline at an agreed upon offset every twenty-five feet (25') along the line and supply a cut sheet.

(b) Sidewalks: stake an agreed upon offset line will be staked every twenty-five feet (25') and supply a cut sheet.

(c) Curb and gutter: stake an agreed upon offset line will be staked every twenty-five feet (25') along the curb line.

(d) Rough grading base course or pavement: the elevations will be established from the concrete gutters or curb and stakes will be set by the CONTRACTOR except at the intersections which shall be “blue top” staked by the ENGINEER.

7.9.3 The CONTRACTOR's stakes and grades are subject to check by the ENGINEER for compliance with the Plans and Project Manual. The CONTRACTOR must keep the ENGINEER informed a reasonable time in advance, at least twenty-four (24) hours, as to his needs for checking lines and grades and for setting stakes in order that the same is done and all necessary measurements are made for record and payment with the minimum of inconvenience to the ENGINEER or of delay to the CONTRACTOR.

7.10. Character of Workmen.

7.10.1 Only skilled foremen and workmen will be employed on WORK requiring special qualifications.

7.10.2 When required by the ENGINEER, the CONTRACTOR shall remove from this project and any other project CONTRACTOR is performing for the CITY any person who commits trespass, or is, in the opinion of the ENGINEER, disorderly, dangerous, insubordinate, or incompetent. The CONTRACTOR shall save harmless the CITY from any damage or claims for compensation that may arise due to the enforcement of this section of the specifications.

7.11. Material and Workmanship.

7.11.1 All material must be of the specified quality, and equal to the approved samples, if samples have been submitted. All WORK must be done and completed in a thorough, workmanlike manner, notwithstanding any omission from the Project Manual or from the Plans. It is the duty of the CONTRACTOR to call the ENGINEER's attention to apparent errors or omissions, and request instructions before proceeding with the WORK.

7.11.2 All defective WORK or material must be removed from the premises by the CONTRACTOR, whether in place or not, and must be replaced with new and satisfactory WORK or material in such manner as the ENGINEER may direct. All material and workmanship of whatever description is subject to the inspection of, and rejection by the ENGINEER, if not in conformance with the specifications.

7.11.3 On all questions concerning the acceptability of material, machinery and classifications of material, execution of the WORK, conflicting interest of CONTRACTOR’s performance of related WORK, and the determination of costs, the decision of the ENGINEER is final and binding upon all parties.

7.11.4 Any defective material or workmanship, or any unfaithful or imperfect WORK which may be discovered before the final acceptance of the WORK must be corrected immediately at the request of the ENGINEER, without extra charge, notwithstanding that it might have been overlooked in previous inspections. Failure to inspect WORK does not relieve the CONTRACTOR from any obligation to perform sound and reliable WORK as herein specified.

7.12. Infringement of Patents.

7.12.1 The CONTRACTOR must hold and save the CITY, its officers, agents and employees harmless from and against all and every demand or demands of any nature or kind, for or on account of the use of any patented invention, article or appliance, included in the material or supplies hereby agreed to be furnished under the contract. The CONTRACTOR must secure and file with his proposal such valid license as may be requisite and necessary to enable the CITY, its officers, agents and employees, or any of them to use such invention, article, material or appliance, without being disturbed or in any way interfered with by any proceeding in law or equity on account thereof. If the CONTRACTOR neglects to secure such licenses as may be necessary and requisite for the purpose aforesaid, then in that event the CITY may, at its option, refuse to consider such bid.

7.13. Methods and Appliances.

7.13.1 The methods and appliances adopted by the CONTRACTOR must be such as will, in the opinion of the ENGINEER, secure a satisfactory quality of work and will enable the CONTRACTOR to complete the WORK in the time agreed upon.

7.14. Subcontractors.

7.14.1 If any part of the WORK to be done under this Contract is subcontracted, the subcontracting must be done in accordance with, and the CONTRACTOR agrees to be bound by, the following provisions:

(a) All subcontracts must be in writing and must provide that all WORK to be performed thereunder will be performed in accordance with the terms of the Contract. All subcontracts must be approved by the ENGINEER before said subcontract is executed.

(b) The subcontracting of any or all of the WORK to be done will in no way relieve the CONTRACTOR of any part of his responsibility under the contract. In case the terms of the subcontract are, in the opinion of the ENGINEER, unsatisfactory from the standpoint of the CITY, or in case the WORK being done under any subcontract is not conducted in a manner satisfactory to the ENGINEER, the CONTRACTOR must, upon written notice to this effect, cause such subcontract to be terminated and the subcontractor and his employees to be removed from the WORK. Any loss or damage that may be suffered on account of such action will be borne by the CONTRACTOR.

7.15. Relations to Other Work.

7.15.1 The CONTRACTOR will so far as practicable, arrange his WORK and dispose of his materials in such a manner as not to interfere with any other work which may be scheduled for the same area, and must arrange to perform his WORK in proper sequence

with other work. When two or more CONTRACTORS are engaged in installation or construction work in the same vicinity, the ENGINEER is authorized to direct the order, manner and rate in which each may conduct his WORK so far as it affects other contracts.

7.16. Protection of Person and Property.

7.16.1 The CONTRACTOR must protect against injury any public or private lawns, gardens, shrubbery or trees encountered in the WORK. All obstructions to traffic must be guarded by barriers and illuminated at night. The CONTRACTOR must not trespass upon private property. Access to private property will be by written permission of the property owner as obtained by the CONTRACTOR. Under all circumstances the CONTRACTOR must comply with the laws and regulations relative to the safety of persons and property and the interruption of traffic, as well as the convenience of the public. The CONTRACTOR will be held responsible for and required to make good at his own expense, all damage to persons and property caused by carelessness or neglect on the part of the CONTRACTOR or subcontractor, or the agent or employees of either, during the progress of the WORK and until its final acceptance. Prior to the commencement of construction, the CONTRACTOR must contact adjacent property owners, who have structures such as fences, buildings, etc. adjacent to the proposed construction and note with the CITY deficiencies that exist. Further deficiencies caused by the CONTRACTOR must be repaired to the satisfaction of the CITY at the cost of the CONTRACTOR.

7.17. Utilities.

7.17.1 Locations of existing public utility lines shown on the plans are approximate only. Where WORK is to be performed adjacent to or across utility lines, the CONTRACTOR must verify the locations in the field and take the necessary precautions. The CONTRACTOR must contact the local utility companies before trenching across any existing underground utility line. Any damage to a utility shall be repaired at the CONTRACTOR's expense and the City of San Luis will not be responsible for any direct or indirect damage to utilities.

7.17.2 It is the CONTRACTOR's responsibility, in accordance with Arizona Revised Statutes §40-360.21 et seq., to notify Arizona Blue Stake (800-782-5348) at least forty-eight (48) hours in advance of beginning construction.

7.17.3 Omissions from, or inclusion of utility locations on plans, is not to be considered as the non-existence of, or definite location of, existing underground utilities.

7.17.4 Adjustment of utility facilities other than those of the City of San Luis will be the responsibility of that particular utility, i.e. Century Link Communications, Southwest Gas Corporation, Arizona Public Service Company, and Time Warner Cable. The CONTRACTOR will notify and coordinate with said companies to assure the WORK is completed in an expeditious manner.

7.18. Irrigation Ditches.

7.18.1 Where the WORK involves the crossing or cutting into irrigation ditches, canals or waste ditches, the CONTRACTOR must make such arrangements with the operators of such ditches as may be necessary to avoid delays in irrigation service and damage to the WORK. Any ditch so cut shall be restored to its original condition in the shortest time practicable.

7.19. Changes in the WORK.

7.19.1 The CITY, without invalidating the Contract, may order extra WORK or make changes by altering, adding to, or deducting from the WORK, the Contract being adjusted as specified herein. All such WORK will be executed under the conditions of the original Contract except that any claim for extension of time caused thereby shall be adjusted at the time of ordering such change.

7.19.2 Extra WORK is that WORK not shown or detailed on the Plans or specified. Such WORK will be governed by all applicable provisions of the Project Manual. Prior to the performance of extra WORK, CONTRACTOR shall provide CITY with a cost estimate for the contemplated extra WORK. No extra WORK shall be performed without said cost estimate.

7.19.3 In order to facilitate the need for field modification documentation; an Extra Work Order form is typically utilized by the ENGINEER to direct the increase or reduction of the scope of WORK. A copy of the Extra Work Order (Document 00580) format is appended elsewhere within this Project Manual. While the Extra Work Order can direct or authorize increases in WORK, payment for that additional WORK cannot be processed until the Contract has been modified through issuance of a change order, which may address several Extra Work Orders, as well as measured quantity changes.

7.19.4 At the time of the project pre-construction conference the CONTRACTOR must identify to the ENGINEER those personnel authorized to execute Change Orders and/or field generated Extra Work Orders on the behalf of the CONTRACTOR. This identification must be in writing and bear the notarized signature of an officer for the CONTRACTOR.

7.19.5 The ENGINEER has authority to increase or decrease the quantities of the items of WORK in the Contract. The total value of these changes may not exceed ten percent (10%) of the total amount of the Contract. Any single item may be increased by any amount or omitted entirely as long as the total amount of the Contract is not changed by more than ten percent (10%). Any change in the quantities of items of WORK included in the Contract that will increase the total amount of the Contract by a value equal to or more than ten percent (10%) shall require the concurrence of the San Luis City Council if the Contract results in an obligation to the CITY of $35,000.00 or more.

7.19.6 In giving instructions, the ENGINEER has authority to make minor changes in the WORK not involving extra cost and not inconsistent with the purposes of the WORK,

but otherwise, except in an emergency endangering life or property, no extra work or change will be made unless in pursuance of a written order by the ENGINEER; and no claim for an addition to the total amount of the Contract will be valid unless so ordered.

7.19.7 The value of any such extra work or change may be determined in one or more of the following ways:

(a) By CONTRACTOR's estimate and the ENGINEER's acceptance of a lump sum;

(b) By unit prices named in the Contract or subsequently agreed upon;

(c) By actual cost, with fifteen percent (15%) added for superintendence, use of tools and profit.

At no time shall the cost for said extra WORK exceed the estimate of cost provided pursuant to §7.19.2 above.

7.19.8 Actual cost will include the cost of labor, material, insurance, taxes, and equipment rental. The cost of labor is the amount paid for same as shown by the payrolls of the CONTRACTOR, with cost of insurance added when such can be shown to have been paid. The cost of material is the actual price paid for same delivered at the site of the WORK. Fifteen percent (15%) will not be added to any unit or lump sum prices herein specified. In case the WORK is performed by a subcontractor, the said fifteen percent (15%) will be added only once to the actual cost of the WORK; however, the CONTRACTOR may add five percent (5%) to the subcontractor's price to cover his own overhead.

7.19.9 If none of the above methods is agreed upon, the CONTRACTOR, provided he receives an order as above, shall proceed with the WORK. In such case and also under paragraph 7.19.7(c) above, the CONTRACTOR must keep and present daily to the ENGINEER a complete, thorough, written breakdown of all labor, materials, and equipment covering all extra WORK for the previous day. The ENGINEER reserves the right to examine the CONTRACTOR's payroll and all other CONTRACTOR's records pertaining to the costs of materials, equipment, labor, and other applicable documents. At no time shall the cost for said extra WORK exceed the estimate of cost provided pursuant to §7.19.2 above.

7.19.10 If the CONTRACTOR, on account of conditions developing during the progress of the WORK, finds it impracticable to comply strictly with this Project Manual and applies in writing for a modification of requirements or of methods of work, such change may be made or authorized by the ENGINEER if not detrimental to the WORK and if without additional cost to the CITY.

7.20. Roads.

7.20.1 The CONTRACTOR must keep open streets and roads subject to interference by the prosecution of the WORK, covered by this contract until the WORK is completed, unless

otherwise approved by the ENGINEER.

7.21. Land.

7.21.1 The land on which the WORK of this contract is to be performed will be provided by the CITY.

7.22. Sanitation.

7.22.1 The ENGINEER must establish and police sanitary rules and regulations for all forces employed under the contract. If the CONTRACTOR fails to enforce these rules the CITY may enforce them at the expense of the CONTRACTOR.

7.22.2 It is the CONTRACTOR's responsibility to provide adequate sanitary facilities on the locale of the project for use by the CONTRACTOR's employees.

7.23. Night Work.

7.23.1 The CONTRACTOR may also be permitted or required to work at night, if in the opinion of the ENGINEER such work is necessary to maintain the required progress or protect the WORK from the elements. If ordered or permitted to work nights, the CONTRACTOR must provide sufficient and satisfactory lighting and other facilities. The CONTRACTOR will receive no extra payment, but compensation will be considered as being included in the prices stipulated for the appropriate items.

7.24. Disposal of Excavated Material.

7.24.1 Before any arrangements for disposal of excavated materials are made, the CONTRACTOR will consult with the CITY, and the CITY will have first claim on all excavated materials. In the event the CITY refuses all or part of the excavated materials, it is the responsibility of the CONTRACTOR to make arrangements for and dispose of such materials.

7.24.2 Should soils excavated under the project be deposited upon properties within the City of San Luis, the site and proposed plan for placement of fill must first be reviewed and approved by the ENGINEER.

7.25. Protection of WORK and Cleaning Up.

7.25.1 The CONTRACTOR is responsible for the care of all WORK until its completion and final acceptance, and the CONTRACTOR must at his own expense replace damaged or lost material and repair damaged parts of the WORK, or the same may be done at the CONTRACTOR's expense by the CITY, and the CONTRACTOR and his sureties will be liable therefore. All new concrete construction that becomes broken or shows evidence of cracks must be completely replaced at the CONTRACTOR's expense. Under no circumstances will patchwork be performed to repair new concrete WORK. The

CONTRACTOR takes all risks from weather and casualties, and may not make any charge for delay from such causes. The CONTRACTOR may however, be allowed a reasonable extension of time on account of such delays, subject to the conditions hereinbefore specified. The CONTRACTOR will remove from the vicinity of the completed WORK all plant equipment and materials belonging to the CONTRACTOR or used under the CONTRACTOR's direction during construction. The CONTRACTOR must clean up all waste or excess materials within the established WORK limits within the project so as to make a neat and workmanlike finish to the entire project, and in the event of the CONTRACTOR's failure to remove said materials, the same may be removed by the CITY at the expense of the CONTRACTOR, and the CONTRACTOR and his sureties will be liable therefor.

7.26. Inspection by ENGINEER.

7.26.1 IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONSTRUCT THE WORK IN STRICT ACCORDANCE WITH THE PLANS AND PROJECT MANUAL. INSPECTION BY THE ENGINEER PRIOR TO THE FINAL INSPECTION WILL NOT RELIEVE THE CONTRACTOR OF THIS RESPONSIBILITY.

7.26.2 The ENGINEER will:

(a) Inspect all sub-base and base courses before placing of succeeding or surface courses.

(b) Be present during the construction of all asphalt or asphaltic items of WORK.

(c) Inspect all form WORK for any concrete items prior to placement of concrete. The CONTRACTOR must notify the ENGINEER one day in advance of when the WORK will be ready for inspection.

(d) Inspect placement of concrete and make necessary tests. The CONTRACTOR must notify the ENGINEER one day in advance of the intended time of concrete placement.

7.26.3 The ENGINEER may require that a sample section of curb and gutter, curb, sidewalk or other concrete items be constructed and finished to the satisfaction of the ENGINEER before the CONTRACTOR is permitted to proceed with construction.

7.26.4 The ENGINEER will inspect all trenches for pipe or other utilities prior to the installation of the pipe or utilities. The ENGINEER may be present during all pipe-laying operations. The ENGINEER will require satisfactory operation tests of all utility lines. The CONTRACTOR must notify the ENGINEER at least one day in advance of the time of need for an inspection or the intended performance of any of the items of construction.

7.27. Guarantee of WORK.

7.27.1 The CONTRACTOR **must** guarantee the WORK against defective material and/or workmanship for a period of two (2) years from the date established by the Notice Of Project Completion issued by the Public Works Department to note acceptance of the completed WORK. Upon discovery, repair work or replacement required in the opinion of the ENGINEER must be done immediately by the CONTRACTOR at the CONTRACTOR's own expense.

7.27.2 If the CONTRACTOR fails to repair such defective material and/or workmanship, or to make replacements within five (5) days after written notice by the CITY, it is agreed that the CITY will make such repairs and replacements and the actual cost of the required labor and material will be chargeable to and payable by the CONTRACTOR.

7.27.3 Any omission on the part of the ENGINEER to condemn defective work or material at the time of construction will not be deemed an acceptance, and the CONTRACTOR will be required to correct defective work or material at any time before acceptance of final payment and within two (2) years thereafter.

7.28. General.

7.28.1 At least 48 hours in advance of the start of construction, the CONTRACTOR must advise all residents and businesses in the immediate vicinity of the project of the type of WORK that is to be undertaken and its approximate duration.

7.28.2 If this project requires the interruption of water/sewer service to a property, the CONTRACTOR must advise property owners/lessor of the interruption at least twenty-four (24) hours in advance of the start of construction.

7.28.3 Access to adjacent properties, cross streets or use of streets scheduled for improvement must be reasonably maintained and fully re-established at the end of each workday.

7.28.4 The CONTRACTOR must maintain dust abatement activities for the duration of the project, including weekends and holidays.

(a) The CONTRACTOR must maintain adequate moisture levels in the surface materials to eliminate blowing dust from these materials.

(b) All haul trucks, whether involved in delivery or removal activities must be covered and/or tarped in order to negate the removal of material from trucks by winds, either natural or caused by the movement of the truck.

(c) No separate payment will be made for these activities. The cost for same will be incorporated into the appropriate Bid Form line item cost.

Article 8: Obligations.

8.1. Contractor.

8.1.1 The CONTRACTOR must do all the WORK, and furnish all labor, equipment, transportation, tools, and such materials as required for the completion of the WORK, free from all claims, liens, and charges, in the manner and under the conditions specified in the Contract.

8.1.2 The WORK and materials furnished must conform strictly with the Project Manual accompanying this Contract. The CONTRACTOR guarantees that all materials and equipment furnished under this contract will be new, unless otherwise specified, and that all WORK is of good quality, free from defects and in conformance with the contract Project Manual. Non-conforming WORK is considered defective. The use of the words "or equal" following the name of any manufacturer, vendor or proprietary product will mean that, in the opinion of the CITY, articles or materials which are offered as a substitute must be equal in quality and performance to the articles or materials specified. The CONTRACTOR must submit requests for substitution to the CITY, and will not proceed with the installation or use any proposed substitution without written permission from the City Engineer.

8.1.3 The CITY reserves the right to perform work related to this project and to use its own forces, and to award other contracts in connection with the project related to the WORK.

8.1.4 The CONTRACTOR must not assign this contract as a whole without written consent of the CITY. Any assignment without such consent may, at the option of the CITY, terminate this agreement. No portion of this Contract will be assigned to a subcontractor without the written consent of the City Engineer.

8.1.5 The CONTRACTOR must designate a superintendent upon the award of the Contract and notify the City's Engineer or the Public Works Director via notarized letter of the superintendent's name, address and telephone number. The superintendent will be in charge of the operations of the CONTRACTOR in the performance of the Work and is authorized to accept any notice, consent, order, direction, decision or other communication on behalf of the CONTRACTOR that may be given to the superintendent under the Contract. The CONTRACTOR must, until the WORK has been completed, keep a competent superintendent at the WORK site during working hours. The CONTRACTOR must, upon the request of the City's Engineer, or the Public Works Director, remove any superintendent who, in the opinion of the City, is incompetent or has in the opinion of the City's Engineer or Public Works Director engaged in improper conduct, and will designate another superintendent who is acceptable to the City. The CONTRACTOR will not substitute a superintendent without the written notice to and consent of the City's Engineer or the Public Works Director. Failure to comply with this paragraph by the CONTRACTOR entitles the City's Engineer and/or the Public Works Director to refuse to issue any certificate until the superintendent has returned to the WORK site or another superintendent who is acceptable to the City's Engineer and/or

the Public Works Director has been substituted.

8.1.6 Contractor warrants, and shall require its subcontractors to warrant, that it is in compliance with all federal immigration laws and regulations that relate to its employees and with A.R.S. § 23-214 relating to verification of employment eligibility.

A breach of this clause shall be deemed a material breach of the Contract and is subject to penalties up to and including termination of this contract.

City retains the legal right to inspect the papers of any Contractor or subcontractor employee who works on this Contract to ensure that the Contractor or subcontractor is complying with this warranty.

8.1.7 The CONTRACTOR must guard or otherwise protect the WORK and its site, and protect the contract specifications, plans, drawings, information, material, plant and real property, whether or not they are supplied by the City to the CONTRACTOR, against loss or damage from any cause.

8.1.8 If the CONTRACTOR fails to comply with any decision or direction given by the City's Engineer, the ENGINEER may employ such methods as the ENGINEER deems advisable to undertake that action which the CONTRACTOR failed to pursue. The CONTRACTOR must, on demand, pay the City an amount that is equal to the aggregate of all costs, expenses, damage incurred or sustained by the City by reason of the CONTRACTOR's failure to comply with any decision or direction of the ENGINEER, including the cost of any methods employed by the ENGINEER to complete the WORK.

8.1.9 The CONTRACTOR may, within ten days after the communication to the CONTRACTOR of any decision or direction, protest that decision or direction. A protest must be in writing, contain full reasons for the protest, be signed by the CONTRACTOR and be given to the City by delivery to the ENGINEER. If the CONTRACTOR gives a protest, any compliance by the CONTRACTOR with the decision or direction that was protested will not be construed as an admission by the CONTRACTOR of the correctness of that decision or direction, or prevent the CONTRACTOR from taking whatever action the CONTRACTOR considers appropriate in the circumstances. A written protest by the CONTRACTOR will not relieve the CONTRACTOR from complying with the decision or direction that is the subject of the protest. The CONTRACTOR must make a protest within three months after the date that a Notice of Project Completion is issued. If the ENGINEER determines that the CONTRACTOR's protest is justified, the City will pay the CONTRACTOR the cost of the additional labor, plant and material necessarily incurred by the CONTRACTOR in carrying out the protested decision or direction.

8.1.10 If the CONTRACTOR incurs or sustains any extra expense or any loss or damage that is directly attributable to:

1) a substantial difference between the information relating to soil conditions at the WORK site that is contained in the Plans and Project Manual specifications or other

documents supplied to the CONTRACTOR for use in preparing the CONTRACTOR's tender or a reasonable assumption of fact based thereon made by the CONTRACTOR, and the actual soil conditions encountered by the CONTRACTOR at the WORK site during the performance of the contract, or

2) any neglect or delay that occurs after the date of the Contract on the part of the City in providing any information or in doing any act that the Contract either expressly requires the City to do or that would ordinarily be done by the CITY in accordance with the usage of the trade,

the CONTRACTOR must, within ten days of the date the actual soil conditions were encountered or the neglect or delay occurred, give the City's Engineer written notice of intention to claim for that extra expense or that loss or damage. When the CONTRACTOR has given a notice, the CONTRACTOR will give the City's Engineer a written claim for extra expense or loss or damage within 30 days of the date that a Notice of Project Completion is issued and not afterwards. A written claim must contain a sufficient description of the facts and circumstances of the occurrence that is the subject of the claim to enable the City's Engineer to determine whether or not the claim is justified and the CONTRACTOR must supply such further and other information for that purpose as the City Engineer requires from time to time. If the City's Engineer determines that a claim is justified, the City will make an extra payment to the CONTRACTOR in an amount that is calculated by the City's Engineer. If, in the opinion of the City's Engineer, an occurrence results in a savings of expenditure by the CONTRACTOR in performing the contract, the amount set out in the Articles of Agreement shall be reduced by an amount that is equal to the saving. If the CONTRACTOR fails to give a notice and a claim within the times stipulated, no extra payment will be made to the CONTRACTOR in respect of the occurrence.

8.1.11 The Contractor shall maintain accurate and complete financial records of its activities and operation relating to this agreement in accordance with generally accepted accounting principles. Contractor agrees that City, or its' authorized representatives, shall have access to and the right to examine, audit, excerpt, copy, or transcribe any pertinent transaction, activity, or records relating to this agreement. All such material, including, but not limited to, all financial records, timecards and other employment records, and proprietary data and information, shall be kept and maintained by Contractor and shall be made available to City during the term of this agreement and for a period of five (5) years thereafter unless City's written permission is given to dispose of any such material prior to such time. All such material shall be maintained by Contractor at a location in Yuma County, Arizona, provided that if any such material is located outside Yuma County, Arizona, then at City's option, Contractor shall pay City for travel, per diem, and other costs incurred by City to examine, audit, excerpt, copy or transcribe such material at such other location.

In the event that an audit of Contractor is conducted specifically regarding this agreement by any Federal or State Auditor, or by any Auditor or Accountant employed by Contractor or otherwise, then Contractor shall file a copy of such audit report with the

City's Finance Director within thirty (30) days of Contractor's receipt thereof, unless otherwise provided by applicable Federal or State Law or under this agreement. City shall make a reasonable effort to maintain the confidentiality of such audit report(s).

Failure on the part of Contractor to comply with any of the provisions of paragraph 8.1.11 shall constitute a material breach of contract and may be cause for debarment.

8.2. Insurance.

8.2.1 Without limiting any of their obligations or liabilities and at their own expense, the CONTRACTOR must purchase and maintain the stipulated minimum insurance with companies duly licensed to do business in the state of Arizona. All policies and forms must be satisfactory to the CITY. Use of alternative insurers requires CITY's prior approval.

8.2.2 The insurance policies, except Workers' Compensation, required by this contract, must name the CITY, and its employees, as Additional Insured. Any insurance coverage carried by the CITY or its employees is excess coverage, and not contributory coverage to that provided by the CONTRACTOR.

8.2.3 Except for the Commercial General Liability insurance subject to paragraph 8.2.9, the CONTRACTOR must maintain all insurance in full force and effect until all required WORK is satisfactorily completed and formally accepted. Failure to maintain the required insurance may, at the sole discretion of the CITY, constitute a material breach.

8.2.4 The policies may provide coverage which contains deductible or self-insured retentions. Such deductible or self-insured retentions are not applicable with respect to the coverage provided to the CITY under such policies. The CONTRACTOR is solely responsible for deductible or self-insured retention, and the CITY may require the CONTRACTOR to secure the payment of such deductible or self-insured retentions by a surety bond or an irrevocable and unconditional letter of credit.

8.2.5 Prior to commencing WORK, the CONTRACTOR must furnish Certificates of Insurance or formal endorsements, issued by CONTRACTOR's insurers to the CITY as evidence that policies providing the required coverage, conditions, and limits are in full force and effect. Such certificates must identify this Contract number or name and must provide for not less than 30 days advance Notice of Cancellation, Termination, or Material Alteration. Certificates must be sent directly to:

City of San Luis
Public Works Department
1090 E. Union St.
PO Box 1170
San Luis, AZ 85366-3012

8.2.6 The CONTRACTOR must carry Workers' Compensation insurance to cover obligations imposed by federal and state statutes having jurisdiction over the CONTRACTOR's employees engaged in the performance of the WORK, and Employer's Liability insurance of not less than $100,000 for each accident, $100,000 disease for each employee, and $500,000 disease policy limit.

8.2.7 If any WORK is subcontracted, the CONTRACTOR must require all Subcontractors to provide Workers' Compensation and Employer's Liability to at least the same extent as provided by the CONTRACTOR.

8.2.8 The CONTRACTOR must carry Commercial/Business Automobile Liability insurance with a combined single limit for bodily injury and property damages of not less than $1,000,000, each occurrence on all vehicles, whether owned or leased, used in performance of the WORK. Such insurance must include coverage for loading and unloading hazardous materials and wastes.

8.2.9 The CONTRACTOR must carry Commercial General Liability insurance with an unimpaired limit of not less than $1,000,000 for each occurrence with a $2,000,000 General Aggregate Limit. The policy must include coverage for bodily injury, products/completed operations and blanket contractual covering, but not limited to, the liability assumed under the indemnification provisions of this Contract. The policy must be primary and the coverage must not exclude Explosion, Collapse and Underground (X, C, U). In the event the General Liability insurance policy is written on a claims made basis, coverage must extend for two years past completion and acceptance of the WORK as evidenced by annual Certificates of Insurance.

8.2.10 The CONTRACTOR must carry Umbrella/Excess Liability insurance with an unimpaired limit of not less than $1,000,000 per occurrence combined limit Bodily Injury and Property Damage that "follows form" and applies in excess of the Commercial General Liability, Commercial/Business Automobile Liability and Employer's Liability, as required above.

8.2.11 If the CITY requires testing of equipment or other similar operations, the CONTRACTOR is responsible for providing appropriate insurance as may be deemed necessary by the City.

8.3. Performance and Payment Bonds.

8.3.1 The CONTRACTOR must maintain a Performance Bond, which is acceptable to the CITY and in the full amount of this contract and for the duration of the contract. CONTRACTOR's failure to maintain a Performance Bond is a default and the CITY may terminate this contract and pursue all other remedies.

8.3.2 The CONTRACTOR must maintain a Payment Bond, which is acceptable to the CITY and in the full amount of this contract and for the duration of the contract. CONTRACTOR's failure to maintain a Payment Bond is a default and the CITY may

terminate this contract and pursue all other remedies.

8.4. Indemnification.

8.4.1 The CONTRACTOR must comply with all applicable federal, state, and local environmental laws, regulations and ordinances, and must indemnify the CITY for any required remediation and from all liabilities, losses, suits, claims, judgements, fines or demands arising by reason of injury or death to any person, damage to any property, or any environmental damage arising out of violations of such laws, regulations, and ordinances.

8.4.2 The CONTRACTOR must indemnify and defend the CITY, and its employees, against all liability or loss, and against all claims or actions based upon or arising out of damage or injury to persons or property caused by or sustained in connection with the performance of the WORK. The CONTRACTOR's indemnification responsibility extends to all Subcontractors and anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether a claim, damage, loss or related expense is caused in part by a party indemnified under this Contract, including the CITY. The amount and type of insurance coverage does not limit the scope of this indemnity.

8.5. Rights and Remedies.

8.5.1 The ENGINEER, or properly authorized agents, will

1) manage the project on behalf of the CITY;
2) calculate and determine the quantity of the WORK performed;
3) inspect all WORK for acceptance or rejection.

The ENGINEER has full authority to reject or condemn any WORK which does not conform to the terms and conditions of the Contract specifications.

8.5.2 All suits for breach of this Contract, and any other judicial proceeding for the enforcement or interpretation of this Contract must be instituted and maintained in a court of competent jurisdiction in the County of San Luis, State of Arizona.

8.5.3 If either party fails to insist upon strict performance of any provisions of this Contract, to exercise any rights or remedies provided by this Contract, or to delay in the exercise of any rights or remedies, the parties are not released from any responsibilities or obligations imposed by law or by this Contract and do not waive the right to insist upon strict performance.

8.5.4 If a court of competent jurisdiction holds any term, part or provision of this agreement to be illegal or in conflict with any law of the State of Arizona, the validity of the remaining terms, parts, or provisions are not affected, and the rights and obligations of the parties are construed and enforced as if the agreement did not contain the invalid part, term, or

provision.

8.5.5 To prevent disputes and litigation, the ENGINEER will determine all questions in relation to the WORK and the construction. In all cases, the ENGINEER will decide questions that arise relative to the execution of the WORK, and his estimates and decision are a condition precedent to the CONTRACTOR's right to receive any money or compensation for any work done or material furnished.

8.5.6 If an action or proceeding is brought for failure to observe any of the provisions of this contract, the prevailing party is entitled to recover, as part of such action or proceeding, all litigation and collection expenses, including but not limited to witness fees, court costs, and reasonable attorney fees.

8.5.7 If the CONTRACTOR neglects, fails or refuses to complete the WORK within the time herein specified, or any proper extension thereof granted by the CITY, then the CONTRACTOR agrees, as consideration for the awarding of this Contract, to pay to the CITY the amount of **$1,000.00**, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contract is in default after the time stipulated in the Contract for completing the WORK. The said amount is fixed and agreed upon by and between the CONTRACTOR and the CITY because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the CITY would in such event sustain, and said amount is agreed to be the amount of damages which the CITY would sustain and said amount may be retained from time to time by the CITY from current periodical estimates.

It is further agreed that time is of the essence for each and every portion of this Contract and for the specifications wherein as definite and certain length of times if fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any WORK, the new time limit fixed by such extension shall be of the essence of this contract.

The CONTRACTOR will not be charged with liquidated damages or any excess cost when the CITY determines that the CONTRACTOR is without fault and the CONTRACTOR's reasons for the time extension are acceptable to the CITY. Further, the CONTRACTOR will not be charged with liquidated damages or any excess cost when the delay in completion of the WORK is due:

1. to any preference, priority or allocation order duly issued by the CITY;

2. to unforeseeable cause beyond the control and without the fault of negligence of the CONTRACTOR, including, but not restricted to, acts of God, or of the public enemy, acts of the CITY, acts of another contractor in the performance of a contract with the CITY, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and

3. to any delays of subcontractors or suppliers occasioned by any of the causes

specified in subsection (1.) and (2.) of this article.

The CONTRACTOR must, within ten (10) days from the beginning of such delay, unless the CITY grants a further period of time prior to the date of final settlement of the Contract, notify the CITY, in writing, of the causes of the delay. The ENGINEER will ascertain the facts and extent of the delay and notify the CONTRACTOR within a reasonable time of its decision in the matter.

8.6. Termination.

8.6.1 The CITY may unilaterally terminate this Contract, or any part of it, at any time, if any of the following conditions occur:

1) the CITY, at its sole discretion, determines conditions encountered prior to or during the WORK make it impossible or impractical to proceed with the WORK;

2) the CONTRACTOR breaches or defaults on any provisions of this agreement;

3) the CONTRACTOR abandons the WORK;

4) the parties mutually agree;

5) the CONTRACTOR fails to perform acceptable work or meet deadlines;

6) the CONTRACTOR is unable to continue because of financial problems;

7) the CONTRACTOR assigns the Contract without prior written approval from the City;

8) the WORK or any part of it is unnecessarily or unreasonably delayed in the opinion of the ENGINEER;

9) from any other cause that prevents the CONTRACTOR from performing the Contract and completing the WORK.

8.6.2 The CONTRACTOR will receive payment for the portion of the WORK actually completed as compensation in full for services performed to the date of termination. This payment amount will be determined by the City Engineer.

8.6.3 The CITY and the CONTRACTOR will fully perform the provisions of this Contract, except that the CITY reserves the right to terminate or abandon the performance, or to abandon any portion of the project for which the CONTRACTOR has performed services. Termination of the Contract, or any portion of it, does not relieve the CONTRACTOR of his responsibilities for the completed WORK or the surety of its obligation for any just claims arising out of the WORK performed prior to termination.

8.6.4 The CITY will notify the CONTRACTOR in writing if the CITY terminates or abandons the service or any part of the services. Immediately after receiving notice, the CONTRACTOR must discontinue advancing WORK and proceed to close its operations.

8.6.5 Upon termination or abandonment, the CONTRACTOR must deliver to the CITY all reports, and estimates entirely or partially completed, together with all unused materials supplied by the CITY. The CONTRACTOR must appraise the WORK completed and submit the appraisal to the CITY for evaluation.

8.7. Miscellaneous.

8.7.1 SUCCESSOR AND ASSIGNS This Agreement is not assignable unless both parties mutually consent otherwise in writing. The requirements of this Agreement are binding upon the heirs, executors, administrators, successors, and assigns of both parties.

8.7.2 GOVERNING LAW The laws of the State of Arizona govern this Agreement as to validity, interpretation, and performance.

8.7.3 WAIVER If either party fails to require the other party to perform any provision of this Agreement, that failure does not prevent the party from later enforcing that provision. Neither party is released from any responsibilities or obligations imposed by law or this Agreement if the other party fails to exercise a right or remedy.

8.7.4 SEVERABILITY If any terms, parts, or provisions of this Agreement are for any reason invalid or unenforceable, the remaining terms, parts, or provisions are nevertheless valid and enforceable.

8.7.5 INTEGRATION This Agreement contains the entire agreement between the parties, and no oral or written statements, promises, or inducements made by either party or its agents not contained or specifically referred to in this Agreement is valid or binding. All modifications to this Agreement must be in writing, signed and endorsed by the parties.

8.7.6 NO PARTNERSHIP Nothing in this Agreement constitutes a partnership or joint venture between the parties, and neither party is the principal or agent of the other.

8.7.7 VENUE The parties must institute and maintain any legal actions or other judicial proceedings arising from this Agreement in a court of competent jurisdiction in Yuma County, Arizona.

8.7.8 COMPLIANCE WITH LAW The CONTRACTOR must comply with all federal, state, and local laws and ordinances applicable to its performance under this contract. The CONTRACTOR will comply with the Americans with Disabilities Act (ADA) and will indemnify the CITY for any costs, including but not limited to, damages, attorney's fees, and staff time in any action or proceeding brought alleging violation of the ADA. The CONTRACTOR will not discriminate against any person on the basis of race, religion, color, age, sex, or national origin in the performance of this Contract, and must comply

with the terms and intent of Title VII of the Civil Rights Act of 1964, P.L. 88-354 (1964). In addition, the CONTRACTOR must include similar requirements of subcontractors in any contracts entered into for performance of the CONTRACTOR's obligations under this Contract. The CONTRACTOR agrees not to participate in or cooperate with an international boycott, as defined in Section 999 (b)(3) and (4) of the Internal Revenue Code of 1954, as amended, or engage in conduct declared to be unlawful by Arizona state law. In addition, the CONTRACTOR must include similar requirements of all subcontractors in contracts entered for performance of the CONTRACTOR's obligations under this Contract.

8.7.9 TIME OF THE ESSENCE Time is of the essence in this Contract. Unless otherwise specifically provided, any consent to delay in the CONTRACTOR's performance of its obligation is applicable only to the particular transaction to which it relates, and is not applicable to any other obligation or transaction.

8.7.10 CONFLICT OF INTEREST. This contract is subject to the Conflict of Interest provisions of the Arizona Revised Statutes §38-511, as amended.

8.7.11 NOTIFICATIONS Written notice of a change of address of either party must be given in writing to the other party. Notice of change of address is deemed effective 5 days after mailing by the party changing address.

This Contract is effective on the _____ day of _____, 20___.

CONTRACTOR

by _____

Print Name:_____

Title _____

Date _____

CITY OF SAN LUIS

by _____
Gerardo Sanchez, MAYOR

ATTEST:

_____ _____
Sonia Cornelio, CITY CLERK Date Signed

APPROVED AS TO FORM:

_____

Kay Macuil, CITY ATTORNEY

AGENDA ITEM REVIEW FORM

Regular City Council Meeting **6. B.**

Meeting Date: 03/09/2022

Department Head: Sonia Cornelio, City Clerk, City Clerk's Office

Submitted By: Sonia Cornelio, City Clerk, City Clerk's Office

Action Requested: Motion
Resolution

ITEM:

Discussion and possible action on any and all matters regarding Resolution No. 2210. A resolution of the Mayor and City Council of the City of San Luis, Arizona, providing for a Call of Election for 2022 Primary and General Elections, designating the election dates and purpose, designating the deadline and location for candidates to file Nomination Petitions and designating the deadline for voter registration. **(Sonia Cornelio, City Clerk)**

SUMMARY:

The City of San Luis 2022 Primary and General Elections are scheduled to be held on August 4, 2022, and November 8, 2022. Publication of Call of Election is a good way to inform the City of San Luis voters about the election and to alert candidates of filing dates. Although publication of Call of Election is optional, it has been customary to publish a Call of Election for four (4) consecutive days in a daily newspaper at least 120 days prior to the Primary Election.

RECOMMENDATION / SUGGESTED MOTION:

I MOVE TO APPROVE AND ADOPT RESOLUTION NO. 2210.

Fiscal Impact

IS THERE FISCAL IMPACT ASSOCIATED WITH THIS ITEM:	N/A
CITY/STATE/FEDERAL FUNDS:	N/A
TOTAL:	N/A
BUDGETED AMOUNT:	N/A
AVAILABLE AMOUNT TO TRANSFER:	N/A
ACCT NAME & GL#/REMAINING BALANCE BEFORE PURCHASE:	N/A
FISCAL IMPACT STATEMENT (IF THIS IS A BUDGET TRANSFER, YOU MUST ATTACH THE BUDGET ADJUSTMENT FORM):	

There is no fiscal impact associated with this item.

Attachments

Resolution No. 2210

Resolution

OFFICE OF THE
MAYOR
CITY OF SAN LUIS

NO. 2210

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF SAN LUIS, ARIZONA, PROVIDING FOR A CALL OF ELECTION FOR THE 2022 PRIMARY AND GENERAL ELECTIONS, DESIGNATING THE ELECTION DATES AND PURPOSE, DESIGNATING THE DEADLINE AND LOCATION FOR CANDIDATES TO FILE NOMINATION PETITIONS AND DESIGNATING THE DEADLINE FOR VOTER REGISTRATION.

WHEREAS, the City of San Luis Primary and General Elections for 2022 are required to be held on certain dates pursuant to Arizona Revised Statutes §16-204, which are August 2, 2022 and November 8, 2022, respectively; and

WHEREAS, City of San Luis elections are required in order to fill the offices of one (1) Mayoral and three (3) City Council seats.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of San Luis, Arizona, as follows:

Section 1. That August 2, 2022 has been set as the date for holding the Primary Election in the City of San Luis, Arizona, for the purpose of nominating candidates for one (1) Mayoral and three (3) City Council seats, terms to expire December 2026, whose names shall appear on the ballot at the Primary Election to be held on August 2, 2022. Any candidates receiving a majority of all the ballots cast at the Primary Election shall be declared elected without running at the General Election.

Section 2. Candidates seeking municipal office may obtain nominations papers and other materials from the City Clerk's Office, located at San Luis City Hall, 1090 E. Union Street, beginning Monday, January 3, 2022. Candidate nomination papers are required to be filed at the City Clerk's Office. The first day to file nomination papers and other forms is March 7, 2022 and the last day to file the nomination paperwork is 6:00 p.m. on April 4, 2022 at the City Clerk's Office in order for their names to appear on the Primary Election ballot. Write-In Candidates filing deadlines are June 23, 2022 at 6:00 p.m. for the Primary Election and September 29, 2022 for the General Election.

Section 3. Yuma County registration and voting lists will be used for the Primary and General Elections. In order to be qualified to vote in the Primary election, voters must be registered by July 5, 2022. To be qualified to vote in the General Election, voters must be registered by October 1, 2022.

PASSED AND ADOPTED by the Mayor and Council of the City of San Luis, Arizona, this **9th** day of **March 2022**.

Gerardo Sanchez, Mayor

ATTEST:

Sonia Cornelio, City Clerk

APPROVE AS TO FORM:

Kay Macuil, City Attorney

AGENDA ITEM REVIEW FORM

Regular City Council Meeting **6. C.**

Meeting Date: 03/09/2022

Department Head: Jose A. Guzman, Director of Planning & Zoning, Planning & Zoning Department

Submitted By: Jose A. Guzman, Director of Planning & Zoning, Planning & Zoning Department

Action Requested: Motion

ITEM:

Discussion and possible action on any and all matters regarding Subdivision Case No. 2021-0751F. A request by Edais Engineering Inc., on behalf of Riedel Holdings LLC, for the approval of Los Mezquites Unit 1 Final Plat; the property is located on the southeast corner of Avenue E and County 23-1/2 Street (San Luis Lane) in San Luis, Arizona. **(Fernando Villegas, Principal Planner)**

A. Staff Presentation
B. Action on Subdivision Case No. 2021-0751F

SUMMARY:

This subdivision will contain approximately 38.81 acres and will consist of 195 residential lots. The lots range in size from approximately 6,000 square feet to 10,000 square feet. Assessor's Parcel Number 227-11-010.

GENERAL PLAN:

City Council approved Major Amendment Case No. 2021-0340 changing the land use designation to Medium Density Residential (MDR). The Major Amendment allowed the applicant to rezone the property to R1-6 (Rezoning Case No. 2021-0693).

DEVELOPMENT AGREEMENT:

A development agreement was approved by Resolution No. 2204, the term of the development agreement is for five (5) years. The development agreement approved includes the following conditions:

- Dedication of Right of Way. At present time owners shall dedicate appropriate right-of-way to the City along County 23 ½ Street and Avenue D ½ alignments in accordance with the updated standards for right-of-way as provided by Public Works Department. Dedication of right of way on County 24th shall be 62 feet from center of alignment and 130 feet within 300 feet of the intersection. Dedication of said right-of-way shall occur at such time and in such manner as required by the City in its sole discretion.
- Development of Improvements. At such time that any lot created by City Lot Split Case Number 2021-0387 or any lot within the Rezoning Case No. 2021-0693 is developed, public improvements, including but not limited to streets, roads, retention basins, utility extensions, utility mains, including pumping stations, lift stations, force mains, traffic signalization, and other off-site public improvements will be made pursuant to City standards as may be required by the Public Works Director of City in his sole discretion. The location of such improvements and/or its development is not confined to the lot being developed, but rather may be located on any portion of the entire Property that is the subject of this agreement.
- Owner agrees to make such dedications of property as may be needed or necessary for such development in the discretion of the Public Works Director. Such dedications and the development of such improvements as described above shall be a condition of the issuance of any building permit(s) or other use permit(s) for the development of any such lot or portion of such lot.
- Street Lights. At such time that any lot created by City Lot Split Case Number 2021-0387 or any lot within Rezoning Case No. 2021-0693 is developed, the Public Works Director may require, in his sole discretion, that the development of street lights in the public right-of-way is needed or desired, the

development of such street lighting in the manner and at the locations as may be determined by the Public Works Director, in his sole discretion, shall be a condition of the issuance of building permit(s) or other use permit(s) for the development of any such lot.

- Residential Development. Developer is requesting Rezoning Case No. 2021-0693 to change Assessor Parcel Number 227-11-004 and portion of parcel 227-11-005 to Medium Density Residential (R1-6) to allow for single-family development. At such time as any portion of the property is developed with single-family homes, the development will be of lots no less in size of 6,000 square feet, amending the lot size requirement and removing the minimum home size on Resolution No. 933.
- Traffic Light Contribution. Any development of the property, or portion thereof, and/or the approval of any subdivision plat, be conditioned upon payment to the city the sum of $260.00 per acre, or any portion of an acre, as a proportionate contribution for a traffic signal at the intersection of County 24th Street and Avenue E.
- Waste Water Treatment Plant. Developer agrees to execute, record, and deliver such agreements, easements, and/or covenants conditions and restrictions that run with the land which is the subject of this development agreement for the benefit of the City of San Luis that will allow the real property of Developer that is the subject of this agreement to be used for fumes or odors from its wastewater treatment operations located at 358 N. Avenue D, and to waive any claims for any damages that might arise from wastewater treatment operations, whatsoever, and agree to indemnify and hold the City of San Luis and its officers, agents, and employees harmless from any and all claims, whatsoever, known or unknown, emanating from wastewater treatment operations including, but not limited to, claims arising from fumes or odors.
- Land Dedication for Park. Owner wishes to donate to the City, and City agrees to accept from Owner, certain land within the Property, containing 5 gross acres of buildable land in addition to the open space requirement. Owner agrees to convey to the City by executing a Deed, free and clear of all liens and encumbrances.
- Covenants Conditions and Restrictions. For any lot developed or to be developed as other than residential development, Owner shall record a covenant, condition, and restriction to run with the land prohibiting the development and use of the property as a school, public or private, of any kind nature, or description.
- Special Taxing Districts. Owner agrees to agree to the formation of a street lighting improvement district, a community facilities district and any enhanced municipal district needed.
- Regulations. The terms of this Agreement are in addition to City codes, rules, fees, and regulations that are applicable to this action.
- Buffer.Developer agrees to build an 8-foot cmu wall along the entire property line along the Detention Center and the East Waste Water Treatment Plant. Including as a buffer, a 30 feet wide green area, and the residential street, totaling 82 feet.

REZONING:

The City of San Luis City Council approved on January 12, 2022, Rezoning Case No. 2021-0639 rezoning 186 acres to Medium Density Residential (R1-6). The Rezoning was approved with the following conditions:

1. Developer must comply with all provisions and conditions of the development agreement approved by Resolution No. 2204.
2. That any development of the property, or a portion thereof, and/or the approval of any subdivision plat, be conditioned upon payment to the city the sum of $260.00 per acre, or any portion of an acre, as a proportionate contribution for a traffic signal at the intersection of County 24th Street and Avenue E.
3. Development must comply with Public Works Standards as approved by City Council during the Final Plat. Updated Public Works Standards to include right-of-way requirements, pavement thickness, and other applicable standards.
4. Developer, on behalf of itself, its heirs, successors, and assigns agrees to transfer a strip of land 30 feet wide all along the Detention Center property. Title to said property shall vest to the San Luis Facility Development Corporation in fee simple free and clear of all liens and encumbrances.

STAFF RECOMMENDATION:

The applicant has provided the information and materials necessary for review of the Final Plat for Los Mezquites Unit 1 Subdivision.

Staff recommends approval of this Final Plat with the following conditions:

1. Developer must comply with all provisions and conditions of the development agreement approved by Resolution No. 2204.
2. Developer must pay to the city the sum of $260.00 per acre, or any portion of an acre, as a proportionate contribution for a traffic signal at the intersection of County 24th Street and Avenue E.
3. A road connection from the southeast corner of the subdivision to County 24th Street should be provided.
4. Developer must comply with review comments letter dated March 8, 2022.
5. Developer agrees to sign the petitions for the creation of a street lighting improvement district, a community facilities district, and any enhanced municipal district needed, prior to the recordation of the plat.

RECOMMENDATION / SUGGESTED MOTION:

I MOVE TO APPROVE SUBDIVISION CASE NO. 2021-0751F WITH THE CONDITIONS AS PRESENTED BY STAFF.

Fiscal Impact

IS THERE FISCAL IMPACT ASSOCIATED WITH THIS ITEM:	N/A
CITY/STATE/FEDERAL FUNDS:	N/A
TOTAL:	N/A
BUDGETED AMOUNT:	N/A
AVAILABLE AMOUNT TO TRANSFER:	N/A
ACCT NAME & GL#/REMAINING BALANCE BEFORE PURCHASE:	N/A

FISCAL IMPACT STATEMENT (IF THIS IS A BUDGET TRANSFER, YOU MUST ATTACH THE BUDGET ADJUSTMENT FORM):

N/A

Attachments

Review Comments Letter Dated March 8, 2022
Location Map
Final Plat
Resolution No. 2204 - Development Agreement
Fire Department Comments
ADOT Comments and Recommendation
Master Plan

City of San Luis
Planning and Zoning Department
Development Services · GIS · Building Safety · Code Enforcement

March 8, 2022

Edais Engineering Inc.
3075 S. Avenue 4E
Yuma, AZ 85365

Re: Subdivision Case No. 2021 0751F-Los Mezquites Unit 1

City staff has reviewed the Final Plat 2nd submittal and staff has the following comments:

City Engineer:

Final Plat –

6. Submit title report.

Improvement Plans –

Traffic Study –

1. Amend the Traffic Study to include and address ADOT comments.
2. Section 8 of the Traffic Study – Roadway Improvements – provides for phased roadway improvements to be constructed as the Los Mezquites subdivision, the Von Verde property and adjacent commercial and industrial properties are developed. A schedule for the improvements with their estimated costs and contributions amounts needs to be developed.

Water and Sewer –

1. Submit ADEQ Approval to Construct permits.

Sewer Lift Station

1. Amend Engineer's Design Report to provide pump, force main and wet well sizing calculations.
2. Wet well to be of polymer concrete.
3. Provide site lights.
4. Provide control panel shade structure.
5. Provide hose bibb at the lift station.
6. Reconstruct existing ABC roads after construction.
7. Provide foundation calculations.
8. Provide electrical plans.
9. Provide emergency generator with automatic transfer switch.
10. Controls to be per City of San Luis.

Sewer Master Plan

1. Update "Exhibit C" to show planned new lift station.

Public Works Department:

Plat

1. Update typical corner lot detail to show NAE along the side of the lot. 10' dimension might be left over from previously used detail.

2. If back part of driveway won't be built with subdivision, Utility Easement should also be Drainage Easement.

Traffic Study

1. T Intersection geometry on F and Cesar Chavez on WB is LT and single through lane (Page 10)
2. Ave E and 24th St geometry on WB is single LT/through/RT lane (Page 11)
3. Current standards for new construction is to implement bike lanes.
4. With schools in the Von Verde development and none in Los Mezquites, would it warrant a traffic signal at 24th and D1/2 sooner that Phase IV for student to safely reach the schools?
5. A school is going to be completed within the next year on the SW corner of Co. 23 ½ and Avenue F, what improvements should be implemented for pedestrians trying to reach that school from Los Mezquites (most likely at Avenue E and Co. 23 1/2)?

Improvement Plans

1. Add barricade on the end of 22nd Drive, 23rd Ave., and San Pedro.
2. Avenue E grades might cause a rough ride at 50 mph (posted speed). Review and update for a smoother ride.
3. Some layers are off on Avenue E striping plan.
4. Add stop bars and stop ahead signs on Co. 23 ½ St as it approaches Avenue E.
5. Add center line stripe on Co. 23 ½ .
6. Add Street sign at Udall Lane and 23rd Trail knuckle.
7. Would it make sense to add a water line connection to the commercial property off Co. 23 ½ for future looping?
8. Water Service should continue to be 1".
9. Final street lighting plan will be reviewed once provided by APS.
10. Add manholes to storm drain line along Monreal Lane with a maximum spacing of 500' (Limits of our cleaning equipment).
11. Update Master Plan "Exhibit B" to include all area included in the Service Area 2 "Exhibit C". Collector should be sized to accept flows from AZ land north of Los Mezquites or if it could be served by a new line on Avenue D.
12. Storm drain system shall withstand a low pressure test (4' hydrostatic head).

Lift Station Plans

1. Lift Station layout is still under review. Need to make sure proposed location won't affect future plant expansion.
2. Lift station design needs to be detailed out. It calls for tee lock in some areas and polymer on other. Need electrical plans and more detail on site grading.
3. Lift station should be a triplex system. If possible, it could only have two smaller pumps to properly serve the next 10 years that can be upgraded in the future as the entire area develops.
4. Incorporate trash basket into the design similar to LS 300 and Juan Sanchez Lift Station. We receive significant amount of trash from the detention center.
5. Modify design to have discharge pipe come out straight up through the top similar to LS300 and Lift Station inside the East WWTP.
6. Discharge pipes shall be 316 SS.
7. Incorporate an odor control system – coordinate with wastewater division for selection.
8. Lift Station should be compatible for future SCADA system implementation.

Planning and Zoning Department:

1. Developer must comply with the approved development agreement.

2. CMU walls shall comply with the required height within setbacks (lots 3 and 4).
3. Developer shall agree to sign the petitions for the creation of a street lighting improvement district, a community facility district, and any enhanced municipal district needed, prior to the recordation of the plat.

Arizona Department of Transportation (ADOT):

1. The intersection of Ave E/ Cesar Chavez Blvd is recommended to have dual left turn lanes in the WB direction. However, the Synchro calculation still shows LOS F in the year 2031.
2. Intersection Ave E/ Cesar Chavez Blvd: The existing storage for the WBL is about 560' and EBR is about 580' as shown in the sketch attached. Please verify the storage length that is used in the Synchro model. It seems 250' is used for both turn lanes.
3. The turn lane design should follow ADOT TGP 430 to determine the storage/ gap and taper for the intersection of Ave E/ Cesar Chavez. Please verify table 20.
4. Please provide the recommendations that have the LOS D or better for the intersection of Ave E/ Cesar Chavez in the year 2031 and 2036.

Fire Department:

1. The City of San Luis Fire Department has concerns regarding access to the subdivision, during development, and at full build out. This parcel is land locked without access from Avenue D ½ and Co.24th Street, and San Luis Lane is currently a single lane road, which will not provide adequate emergency access to the subdivision, if blocked by traffic. A second means of ingress/egress, to the entire project, will need to be provided for Fire Fighting tactics prior to construction. The City of San Luis Fire Department reserves the right to comment upon subsequent submittals.

Please be advised that the comments made here are tentative in nature. Until all documentation, information, and drawings are submitted and approved in final form, and all permits for construction are approved and issued, the City of San Luis reserves the right to make further comments or require further information or submissions. Any construction which occurs prior to issuance of proper permits is occurring in contravention of the ordinances of the City, and is occurring at the risk of the Developer.

If you have any questions on these comments, please contact the Planning and Zoning Department at 928-341-8563.

Thank you,

Fernando Villegas
Principal Planner

January 5, 2022

SUBDIVISION CASE NUMBER: 2021-0751F

CASE SUMMARY: A request by Edais Engineering Inc., on behalf of Riedel Holdings LLC for the final plat approval for Los Mezquites Unit 1. This subdivision will contain 196 lots, in approximately 41.2 acres. The minimum lot size is 6,000 square feet. The property is located on the southeast corner of Avenue E and County 13 ½ Street (San Luis Lane) between Avenue E and Avenue D ½ Street (24th Avenue). PID # 227-11-005, San Luis, Arizona.

PUBLIC MEETING: February 8, 2022

COMMENTS DUE: January 15, 2022

Your comments on this case will help us prepare an accurate and timely staff report. Your comments on this case will be inserted "as is" into the staff report with your name, department, and telephone number, should the applicant have any questions. Your comments are a public record and will be available to the public, media, and the applicant, in addition to the Commission hearing this case. Please complete the section below and return via e-mail. For additional information, please contact the Planning and Zoning Department at (928) 341-8563 or at Fervillegas@sanluisaz.gov

Thank you,

Fernando Villegas
Principal Planner
Attachment: Location Map, Preliminary Plat and Master Plan

☒ COMMENTS ☐ NO COMMENTS

Enter Comments below: ADOT Southwest District is requesting to review and comment on a Traffic Impact Analysis (TIA) for the proposed development. We would like to assess the

Date: potential impact the new development will have on the intersection of SR 195 & Ave E. Direct access to SR 195 from the development will not be permitted as this is an access-

Agency: controlled highway.

Phone: 1/12/22 ADOT Southwest District (928) 317-2159

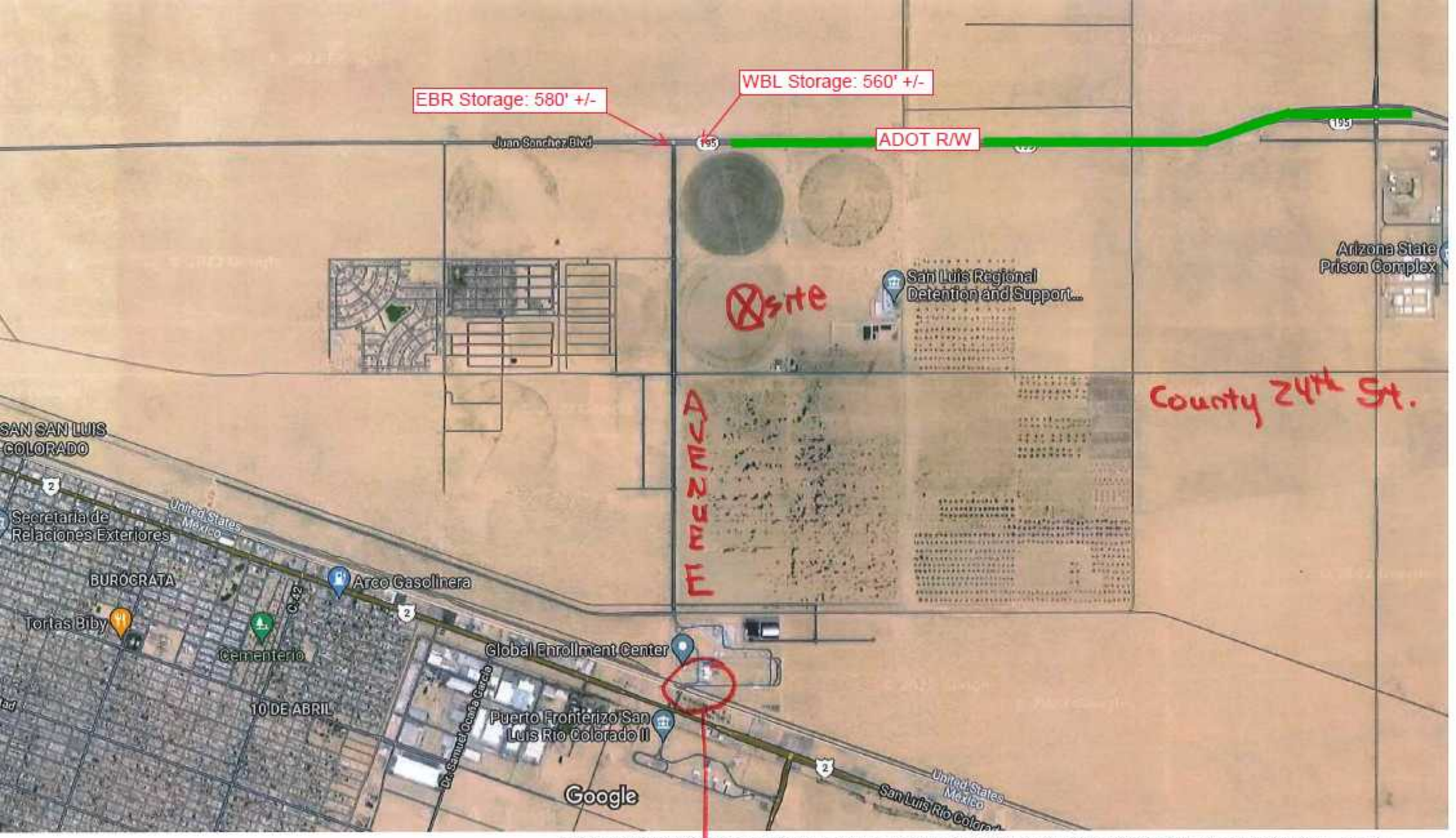
Return to: Fervillegas@sanluisaz.gov

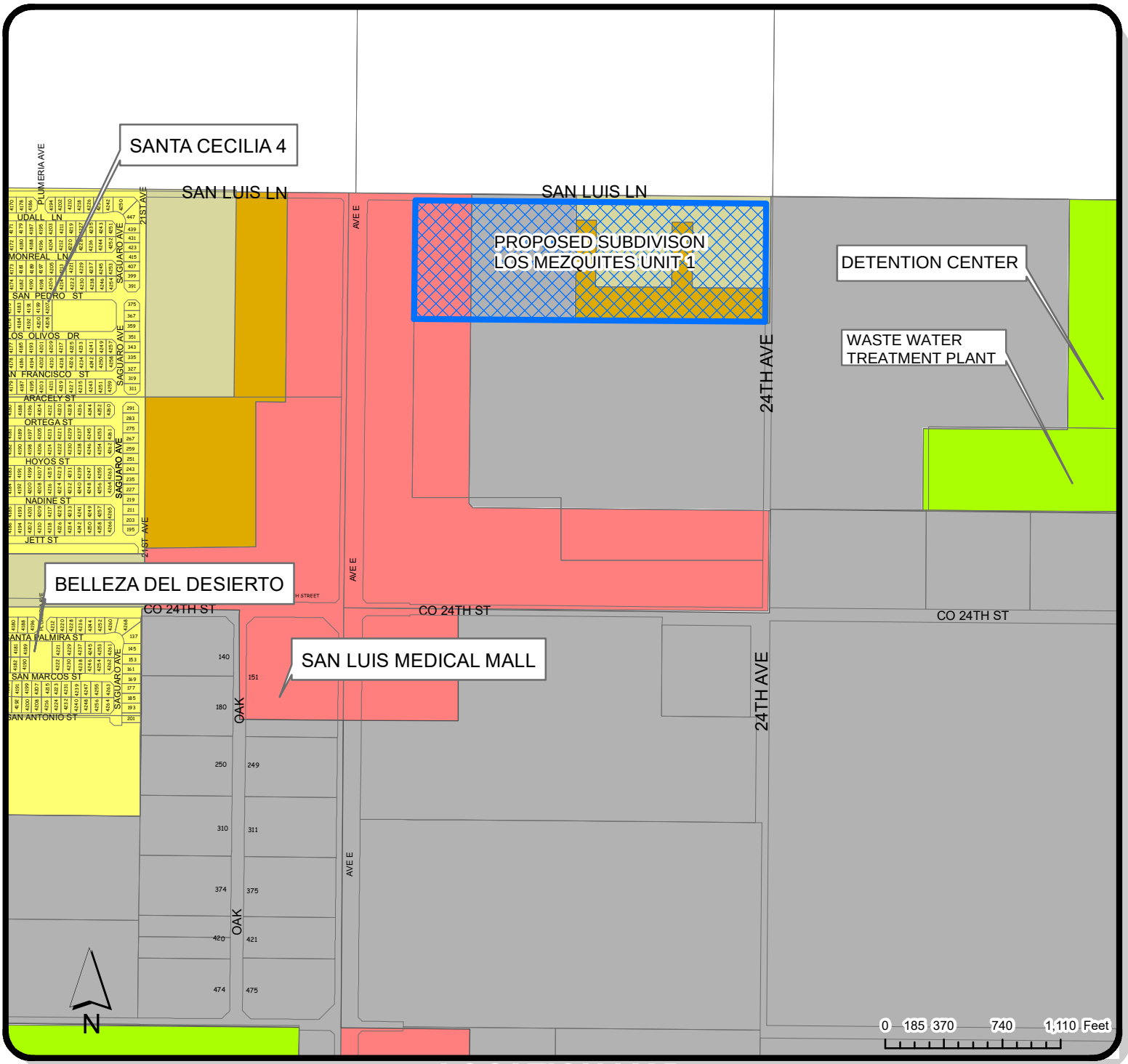
Re: Los Mezquites Final Plat-ADOT Southwest District Comments

Good morning, below are comments regarding the Los Mezquites Subdivision and Von Verde Development. Please contact me if you have any questions. Thank you.

1. The intersection of Ave E/ Cesar Chavez Blvd is recommended to have dual left turn lanes in the WB direction. However, the Synchro calculation still shows LOS F in the year 2031.
2. Intersection Ave E/ Cesar Chavez Blvd: The existing storage for the WBL is about 560' and EBR is about 580' as shown in the sketch attached. Please verify the storage length that is used in the Synchro model. It seems 250' is used for both turn lanes.
3. The turn lane design should follow ADOT TGP 430 to determine the storage/ gap and taper for the intersection of Ave E/ Cesar Chavez. Please verify table 20.
4. Please provide the recommendations that have the LOS D or better for the intersection of Ave E/ Cesar Chavez in the year 2031 and 2036.

Isabell Garcia
Development TES
Southwest District
P- (928) 317-2159
E-mail- IGarcia@azdot.gov


EBR Storage: 580' +/-
WBL Storage: 560' +/-
ADOT R/W
Juan Sanchez Blvd
195
Arizona State Prison Complex
San Luis Regional Detention and Support...
Site
County 24th St.
AVENUE E
SAN SAN LUIS COLORADO
Secretaria de Relaciones Exteriores
United States Mexico
BUROCRATA
Arco Gasolinera
Tortas Biby
Cementerio
Global Enrollment Center
10 DE ABRIL
Puerto Fronterizo San Luis Rio Colorado II
Dr. Samuel Ocaña García
San Luis Rio Colorado
Google
Imagery ©2022 CNES / Airbus, Landsat / Copernicus, Maxar Technologies, U.S. Geological Survey, USDA Farm Service Agency, Map data ©2022 INEGI 2000 ft
Port of Entry



LOCATION MAP

LOCATION OF SUBJECT PROPERTY

PROPOSED SUBDIVISION- LOS MEZQUITES UNIT 1

Zoning

SINGLE RESIDENCE ZONING DISTRICTS
R1-6
RA-10
COMMERCIAL ZONING DISTRICTS
C-1
C-2
INDUSTRIAL ZONING DISTRICTS
LI
MULTIPLE RESIDENCE ZONING DISTRICTS
R-2
R-3

SUBDIVISION

CASE #
2021-0751F

DATE:
12/28/2021

PLANNING & ZONING

GIS

CREATED BY:
ISAAC GUTIERREZ

CHECKED BY:
FERNANDO VILLEGAS

APPROVED BY:
JOSE A. GUZMAN

LOS MEZQUITES SUBDIVISION UNIT 1

A SUBDIVISION OF PARCEL A OF THE SAN LUIS PORT LOT SPLIT AS RECORDED IN BOOK __ OF PLATS,
PAGE __, YUMA COUNTY RECORDERS OFFICE, YUMA COUNTY, ARIZONA
BEING A PORTION OF THE N 1/2 OF THE SW 1/4 OF SECTION 11, T11S, R24W, G.&S.R.B.&M., YUMA COUNTY , ARIZONA
DATE OF PREPARATION: MAY 2021 NUMBER LOTS: 196 ACREAGE: 41.02 ACRES

FINAL PLAT

SCALE: 1"=50'

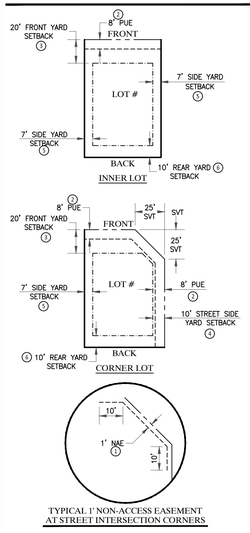
LEGEND

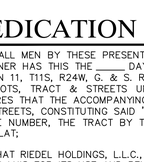
- CENTERLINE / SECTION LINE
- RIGHT OF WAY LINE
- SETBACK LINE
- EASEMENT LINE (TYPE AS SHOWN)
- 1 — NEW LOT NUMBER
- ■ — NEW STREET MONUMENT YUMA COUNTY STD DETAIL No. 4-080
- O — EXISTING MONUMENT (TYPE AS NOTED)
- ROW — RIGHT OF WAY
- NAE — NON ACCESS EASEMENT
- PUE — PUBLIC UTILITY EASEMENT
- APN — ASSESSOR'S PARCEL NUMBER
- BK — BK
- PG — PG
- YCR — YUMA COUNTY RECORDS

KEYNOTES

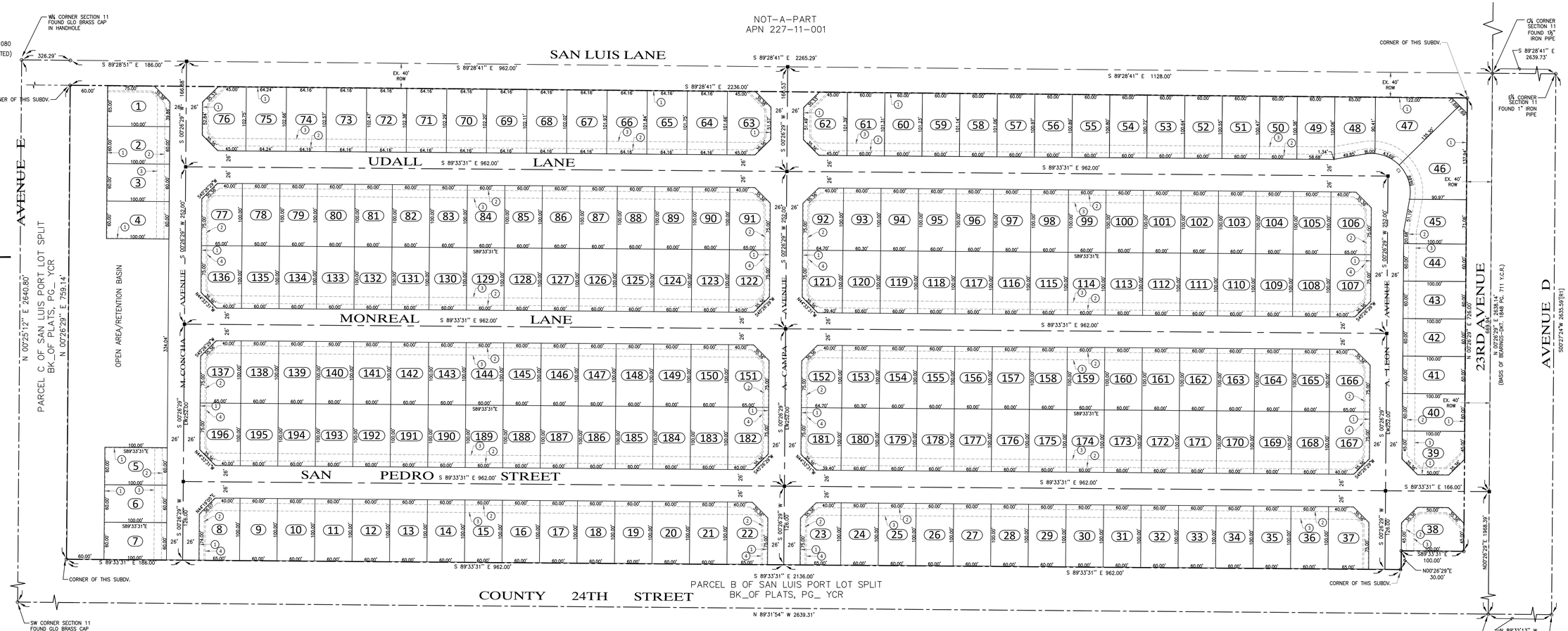
1. NEW 1' NON-ACCESS EASEMENT
2. NEW 8' PUE (PUBLIC UTILITY EASEMENT)
3. NEW 20' FRONT YARD SETBACK LINE
4. NEW 10' STREET SIDE YARD SETBACK LINE
5. NEW 7' SIDE YARD SETBACK LINE
6. NEW 10' REAR YARD SETBACK LINE

TYP. LOT LAYOUT





TYPICAL 1' NON-ACCESS EASEMENT AT STREET INTERSECTION CORNERS



DEDICATION

KNOW ALL MEN BY THESE PRESENTS: THAT RIEDEL HOLDINGS, L.L.C., AN ARIZONA LIMITED LIABILITY COMPANY, AS OWNER HAS THIS THE _____ DAY OF_____ 2021, CAUSED A PORTION OF THE NW1/4 OF THE SW1/4 OF SECTION 11, T11S, R24W, G. & S. R. B. & M. YUMA COUNTY, ARIZONA, AS PLATTED HEREON, TO BE SUBDIVIDED INTO LOTS, TRACT & STREETS UNDER THE NAME OF "LOS MEZQUITES SUBDIVISION UNIT 1" AND HEREBY DECLARES THAT THE ACCOMPANYING PLAT SETS FORTH THE LOCATION AND GIVES THE DIMENSIONS OF THE LOTS AND STREETS, CONSTITUTING SAID "LOS MEZQUITES SUBDIVISION UNIT 1" AND THAT EACH LOT SHALL BE KNOWN BY THE NUMBER, THE TRACT BY THE LETTER AND THE STREETS BY THE NAME GIVEN EACH RESPECTIVELY ON SAID PLAT;

AND THAT RIEDEL HOLDINGS, L.L.C., AS OWNER, HEREBY DEDICATES THE STREETS SHOWN HEREON TO THE CITY OF SAN LUIS FOR ITS USE AND BENEFIT, AND THAT THE EASEMENTS ARE DEDICATED FOR THE USES SHOWN AND DEFINED ON SAID PLAT AND AS SET FORTH IN THE DECLARATION OF RESERVATIONS, COVENANTS, CONDITIONS AND RESTRICTIONS RECORDED CONCURRENTLY HEREWITH. TRACT "A" IS DEDICATED TO THE CITY OF SAN LUIS FOR USE AS STORM WATER RETENTION BASIN AND COMPATIBLE RECREATIONAL USES. THE EASEMENTS ARE DEDICATED FOR THE PURPOSE SHOWN HEREON. A THREE FOOT NON-CONSTRUCTION AND NO OBSTRUCTION EASEMENT FROM THE FURTHER PROJECTION ON ANY SIDE OF ALL FIRE HYDRANTS; A TWELVE INCH NON-CONSTRUCTION AND NO OBSTRUCTION EASEMENT AROUND WATER METERS; AND 24 INCH NON-CONSTRUCTION AND NO OBSTRUCTION EASEMENT FOR STREET LIGHTS IS HEREBY GRANTED.

IN WITNESS WHEREOF: RIEDEL HOLDINGS, L.L.C., HAS CAUSED ITS CORPORATE NAME TO BE SIGNED AND ITS CORPORATE SEAL TO BE AFFIXED BY THE SIGNATURE OF NIEVES GARCIA RIEDEL, AS MEMBER, THEREUNTO DULY AUTHORIZED ON THIS THE _____ DAY OF_____ 2021.

BY:
NIEVES GARCIA RIEDEL, MEMBER
RIEDEL HOLDINGS, L.L.C.

ACKNOWLEDGMENT

STATE OF ARIZONA)
> SS
COUNTY OF YUMA)

ON THIS THE _____DAY OF_____2021 BEFORE ME, THE UNDERSIGNED OFFICER PERSONALLY APPEARED, NIEVES GARCIA RIEDEL, WHO ACKNOWLEDGED HERSELF TO BE MEMBER OF RIEDEL HOLDINGS, L.L.C., AN ARIZONA LIMITED LIABILITY COMPANY, AND SHE AS SUCH OFFICER BEING AUTHORIZED TO DO SO, EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSES THEREIN CONTAINED, BY SIGNING THE NAME OF THE LIMITED LIABILITY COMPANY BY HERSELF, AS SUCH OFFICER.

IN WITNESS WHEREOF, I HAVE SET MY HAND AND OFFICIAL SEAL.

BY: _____
NOTARY PUBLIC

MY COMMISSION EXPIRES: _____

BASIS OF BEARING

THE MID-SECTION LINE OF SECTION 11, T11S, R24W, G.&S.R.B.&M., YUMA COUNTY, ARIZONA, AS SHOWN ON DKT. 1848, PAGE 711, YUMA COUNTY RECORDERS OFFICE, YUMA COUNTY, ARIZONA.
BEARING N 00°26'29" E

RESTRICTIVE COVENANTS

HAVE BEEN RECORDED CONCURRENTLY AND ARE A PART OF THIS PLAT

APPROVED

STATE OF ARIZONA)
> SS
CITY OF SAN LUIS)

THIS SUBDIVISION AS PLATTED HEREON HAS BEEN APPROVED BY THE MAYOR AND THE CITY COUNCIL OF THE CITY OF SAN LUIS, ARIZONA.

MAYOR — DATE

CITY MANAGER — DATE

DIRECTOR OF PLANNING AND ZONING DEPARTMENT — DATE

CITY ENGINEER — DATE

CITY PUBLIC WORKS DIRECTOR — DATE

SUBDIVIDER/OWNER

RIEDEL HOLDINGS, LLC
1910 JUAN SANCHEZ BLVD
P.O. BOX 1649
SAN LUIS, AZ. 85349
(928) 627-8593

CURVE TABLE

CURVE	DELTA	CHORD DIRECTION	CHORD	TANGENT	RADIUS	LENGTH
C1	110°19'02"	N44°33'31"W	101.77'	89.07'	62.00'	119.37'

LOT AREAS

LOT	AREA	LOT	AREA	LOT	AREA	LOT	AREA	LOT	AREA	LOT	AREA	LOT	AREA	LOT	AREA	LOT	AREA
1	6180.48 SF	26	6000.00 SF	51	6030.52 SF	76	6570.63 SF	101	6000.00 SF	126	6000.00 SF	151	6187.50 SF	176	6000.00 SF		
2	6000.00 SF	27	6000.00 SF	52	6035.58 SF	77	6187.50 SF	102	6000.00 SF	127	6000.00 SF	152	6172.50 SF	177	6000.00 SF		
3	6000.00 SF	28	6000.00 SF	53	6040.64 SF	78	6000.00 SF	103	6000.00 SF	128	6000.00 SF	153	6015.00 SF	178	6000.00 SF		
4	6000.00 SF	29	6000.00 SF	54	6045.69 SF	79	6000.00 SF	104	6000.00 SF	129	6000.00 SF	154	6000.00 SF	179	6000.00 SF		
5	6000.00 SF	30	6000.00 SF	55	6050.75 SF	80	6000.00 SF	105	6000.00 SF	130	6000.00 SF	155	6000.00 SF	180	6045.00 SF		
6	6000.00 SF	31	6000.00 SF	56	6055.81 SF	81	6000.00 SF	106	6187.50 SF	131	6000.00 SF	156	6000.00 SF	181	6142.50 SF		
7	6000.00 SF	32	6000.00 SF	57	6060.87 SF	82	6000.00 SF	107	6187.50 SF	132	6000.00 SF	157	6000.00 SF	182	6187.50 SF		
8	6175.00 SF	33	6000.00 SF	58	6065.93 SF	83	6000.00 SF	108	6000.00 SF	133	6000.00 SF	158	6000.00 SF	183	6000.00 SF		
9	6000.00 SF	34	6000.00 SF	59	6070.98 SF	84	6000.00 SF	109	6000.00 SF	134	6000.00 SF	159	6000.00 SF	184	6000.00 SF		
10	6000.00 SF	35	6000.00 SF	60	6076.04 SF	85	6000.00 SF	110	6000.00 SF	135	6000.00 SF	160	6000.00 SF	185	6000.00 SF		
11	6000.00 SF	36	6000.00 SF	61	6081.10 SF	86	6000.00 SF	111	6000.00 SF	136	6187.50 SF	161	6000.00 SF	186	6000.00 SF		
12	6000.00 SF	37	6187.50 SF	62	6476.01 SF	87	6000.00 SF	112	6000.00 SF	137	6187.50 SF	162	6000.00 SF	187	6000.00 SF		
13	6000.00 SF	38	6375.00 SF	63	6488.01 SF	88	6000.00 SF	113	6000.00 SF	138	6000.00 SF	163	6000.00 SF	188	6000.00 SF		
14	6000.00 SF	39	6375.00 SF	64	6525.63 SF	89	6000.00 SF	114	6000.00 SF	139	6000.00 SF	164	6000.00 SF	189	6000.00 SF		
15	6000.00 SF	40	6000.00 SF	65	6531.41 SF	90	6000.00 SF	115	6000.00 SF	140	6000.00 SF	165	6000.00 SF	190	6000.00 SF		
16	6000.00 SF	41	6000.00 SF	66	6537.20 SF	91	6187.50 SF	116	6000.00 SF	141	6000.00 SF	166	6187.50 SF	191	6000.00 SF		
17	6000.00 SF	42	6000.00 SF	67	6542.98 SF	92	6172.50 SF	117	6000.00 SF	142	6000.00 SF	167	6187.50 SF	192	6000.00 SF		
18	6000.00 SF	43	6000.00 SF	68	6548.76 SF	93	6015.00 SF	118	6000.00 SF	143	6000.00 SF	168	6000.00 SF	193	6000.00 SF		
19	6000.00 SF	44	6000.00 SF	69	6554.55 SF	94	6000.00 SF	119	6000.00 SF	144	6000.00 SF	169	6000.00 SF	194	6000.00 SF		
20	6000.00 SF	45	6879.05 SF	70	6560.33 SF	95	6000.00 SF	120	6045.00 SF	145	6000.00 SF	170	6000.00 SF	195	6000.00 SF		
21	6000.00 SF	46	10875.12 SF	71	6566.12 SF	96	6000.00 SF	121	6142.50 SF	146	6000.00 SF	171	6000.00 SF	196	6187.50 SF		
22	6187.50 SF	47	9449.85 SF	72	6571.90 SF	97	6000.00 SF	122	6187.50 SF	147	6000.00 SF	172	6000.00 SF				
23	6187.50 SF	48	6133.63 SF	73	6577.68 SF	98	6000.00 SF	123	6000.00 SF	148	6000.00 SF	173	6000.00 SF				
24	6000.00 SF	49	6020.25 SF	74	6583.47 SF	99	6000.00 SF	124	6000.00 SF	149	6000.00 SF	174	6000.00 SF				
25	6000.00 SF	50	6025.46 SF	75	6597.47 SF	100	6000.00 SF	125	6000.00 SF	150	6000.00 SF	175	6000.00 SF				

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT I AM A LAND SURVEYOR LISTED ON THE ROSTER OF ACTIVE REGISTRANTS BY THE STATE BOARD OF TECHNICAL REGISTRATION OF ARIZONA AND THAT THIS MAP CONSISTING OF ONE (1) SHEET CORRECTLY REPRESENTS A SURVEY MADE UNDER MY SUPERVISION. THAT ALL MONUMENTS SHOWN HEREON ACTUALLY EXIST AND THEIR POSITIONS ARE CORRECTLY SHOWN.

NOT FOR RECORDATION FOR REVIEW ONLY

JUAN N. LOMELI — R.L.S. No. 22767

PREPARED BY:

Edais
Engineering, Inc.
3075 S. AVENUE 4 E
YUMA, ARIZONA 85365
(928) 344-3566

SHEET 1 OF 1

CONFORMED COPY
2021-47097 RESOLUTION
12/22/2021 09:51:20 AM Pages: 13 Fees: $15.00
Requested By:CITY OF SAN LUIS
Recorded By: arios
Robyn Stallworth Pouquette County Recorder, YUMA County AZ

WHEN RECORDED MAIL TO:

CITY OF SAN LUIS
ATTN: CITY CLERK
P.O. BOX 1170
SAN LUIS, ARIZONA 85349

The above area is to be reserved for recording information

****

CAPTION HEADING:

Resolution
Resolution No. 2204
Riedel Holdings, L.L.C.
Los Mezquites Development Agreement

OFFICE OF THE
MAYOR
CITY OF SAN LUIS

Resolution

NO. 2204

A RESOLUTION OF THE MAYOR AND CITY COUNCIL OF THE CITY OF SAN LUIS, ARIZONA AUTHORIZING AND DIRECTING THE ENTERING INTO A DEVELOPMENT AGREEMENT DEVELOPMENT BETWEEN THE CITY OF SAN LUIS, ARIZONA AND RIEDEL HOLDINGS, AZ LLC.

WHEREAS, Nieves Riedel, Riedel Holdings, L.L.C.; Owner, desires to enter into a development agreement for Los Mezquites project to be located in San Luis, Arizona; and

WHEREAS, A.R.S. § 9-500.05 grants power to a municipality to enter into development agreements; and

WHEREAS, the parties desire to enter into such agreement; and

WHEREAS, the applicant and the city staff agreed to all matters in the City's proposed development agreement; and

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Council of the City of San Luis, State of Arizona, as follows:

SECTION 1. That the development agreement proposed by the staff of the City of San Luis, Arizona attached hereto as Exhibit "A", is hereby approved;

PASSED AND ADOPTED by the Mayor and City Council of the City of San Luis, Arizona, this 21st day of December 2021.

APPROVED:

A Carrasco

Africa Luna-Carrasco, Vice-Mayor

ATTEST:

Deputy City Clerk

for Sonia Cornelio, City Clerk

APPROVED AS TO FORM:

Kay Marion Macuil

Kay Marion Macuil, City Attorney

LOS MEZQUITES DEVELOPMENT AGREEMENT

THIS DEVELOPMENT AGREEMENT (the "**Agreement**") is entered into as of 21st day of December, 2021 ("**Effective Date**") by and between the City of San Luis an Arizona municipal corporation (the "**City**") and Riedel Holdings, AZ LLC, (the "**Owner**"). This Agreement is entered into pursuant to City Resolution Number 2204.

RECITALS

A. WHEREAS, A.R.S. § 9-500.05 authorizes the City to enter into development agreements with landowners and persons having an interest in real property that is located in the City; and

B. WHEREAS, Owner, owns real property located in the municipal limits of the City which is legally described on Exhibit 1 (the **"Property")** and is currently being developed for a commercial shopping center ("**Shopping Center**") and residential housing ("**Housing**"), and

C. WHEREAS, Owner has applied for a rezoning and lot split in order to develop the aforementioned Shopping Center and Housing Projects;

D. WHEREAS, A.R.S. § 9-500.05 provides, in part, that a development agreement can provide for the permitted uses of land; the density and intensity of uses; reservation or dedication of land for public purposes; conditions, terms, restrictions and requirements for public infrastructure; conditions, terms, restrictions and requirements relating to the governing body's intent to form a special taxing district pursuant to title 48; and any other matters relating to the development of the property; and

E. WHEREAS, the City and Owner desire to enter into an agreement to provide for the rezoning and the splitting of land and provide for the lands future development; and

F. WHEREAS, the City's governing body has authorized execution of this Agreement by Resolution No. 2204;

NOW, THEREFORE, the parties agree as follows:

AGREEMENT

DEFINITIONS

The following terms shall have the meanings set forth below whenever used in this Agreement, except where the context clearly indicates otherwise:

Agreement shall mean this development agreement.

City shall mean and refer to the City of San Luis, an Arizona municipal corporation, and any successor public body or entity.

Owner shall mean and refer to Riedel Holdings LLC, and any successor in ownership.

Property as used in this Agreement shall mean and refer to all of the real Property, which is legally described in Exhibit 1.

ARTICLE 1. DEVELOPMENT PLAN

1.1. Duration of Development Agreement. The term of this Agreement shall be for a period of five (5) years from date of execution.

1.2 Failure of Timely Performance. In the event that either party hereto fails to perform any of its obligations which are set forth in or contemplated by this Agreement in a timely manner, and should such failure not otherwise be excused by agreement of the parties or by the terms of this Agreement, such failure shall be considered to be a breach of this Agreement and the nonbreaching party shall have their respective remedies set forth in Section 5.3 of this Agreement.

1.3.Review Process. The City acknowledges the necessity for expeditious review by the City of all plans and other materials ("**Submitted Materials**") submitted by the Owner to the City hereunder or under any zoning procedure, permit procedure, or other governmental procedure pertaining to the development of the Property and agrees to use its reasonable efforts accomplish such an expeditious review of the Submitted Materials whenever possible.

ARTICLE 2. SPECIAL PROVISIONS FOR DEVELOPMENT

2.1 Dedication of Right of Way. At present time Owners shall dedicate appropriate right-of-way to the City along County 23 ½ Street and Avenue D ½ alignments in accordance with the updated standards for right-of-way as provided by Public Works Department. Dedication of right of way on County 24th shall be 62 feet from center of alignment and 130 feet within 300 feet of the intersection. Dedication of said right-of-way shall occur at such time and in such manner as required by the City in its sole discretion.

2.2 Development of Improvements. At such time that any lot created by City Lot Split Case Number 2021-0387 or any lot within the Rezoning Case No. 2021-0693 is developed, public improvements, including but not limited to streets, roads, retention basins, utility extensions, utility mains, including pumping stations, lift stations, force mains, traffic signalization, and other off-site public improvements will be made pursuant to City standards as may be required by the Public Works Director of City in his sole discretion. The location of such improvements and/or its development is not confined to the lot being developed, but rather may be located on any portion of the entire Property (Exhibit 1) that is the subject of this agreement. Owner agrees to make such

dedications of property as may be needed or necessary for such development in the discretion of the Public Works Director. Such dedications and the development of such improvements as described above shall be a condition of the issuance of any building permit(s) or other use permit(s) for the development of any such lot or portion of such lot.

2.3 Street Lights. At such time that any lot created by City Lot Split Case Number 2021-0387 or any lot within Rezoning Case No. 2021-0693 is developed, the Public Works Director may require, in his sole discretion, that the development of street lights in the public right-of-way is needed or desired, the development of such street lighting in the manner and at the locations as may be determined by the Public Works Director, in his sole discretion, shall be a condition of the issuance of building permit(s) or other use permit(s) for the development of any such lot.

2.4 Residential Development. Developer is requesting Rezoning Case No. 2021-0693 to change Assessor Parcel Number 227-11-004 and portion of parcel 227-11-005 to Medium Density Residential (R1-6) to allow for single-family development. At such time as any portion of the property is developed with single family homes, the development will be of lots no less in size of 6,000 square feet, amending the lot size requirement and removing the minimum home size on Resolution No. 933.

2.5 Traffic Light Contribution. Any development of the property, or portion thereof, and/or the approval of any subdivision plat, be conditioned upon payment to the city the sum of $260.00 per acre, or any portion of an acre, as a proportionate contribution for a traffic signal at the intersection of County 24th Street and Avenue E.

2.6 Waste Water Treatment Plant. Developer agrees to execute, record, and deliver such agreements, easements, and/or covenants conditions and restrictions that run with the land which is the subject of this development agreement for the benefit of the City of San Luis that will allow the real property of Developer that is the subject of this agreement to be used for fumes or odors from its wastewater treatment operations located at 358 N. Avenue D, and to waive any claims for any damages that might arise from wastewater treatment operations, whatsoever, and agree to indemnify and hold the City of San Luis and its officers, agents, and employees harmless from any and all claims, whatsoever, known or unknown, emanating from wastewater treatment operations including, but not limited to, claims arising from fumes or odors.

2.7 Land Dedication for Park. Owner wishes to donate to the City, and City agrees to accept from Owner, certain land within the Property, containing 5 gross acres of buildable land in addition to the open space requirement. Owner agrees to convey to the City by executing a Deed, free and clear of all liens and encumbrances.

2.8 Covenants Conditions and Restrictions. For any lot developed or to be developed as other than residential development, Owner shall record a covenant, condition and restriction to run with the land prohibiting the development and use of the property as a school, public or private, of any kind nature, or description.

2.9 Special Taxing Districts. Owner agrees to agree to the formation of a street lighting improvement district, a community facilities district and any enhanced municipal district needed.

2.10 Regulations. The terms of this Agreement are in addition to City codes, rules, fees, and regulations that are applicable to this action.

2.11 Buffer. Developer agrees to build an 8 foot cmu wall along the entire property line along the Detention Center and the East Waste Water Treatment Plant. Including as a buffer, a 30 feet wide green area and the residential street, totaling 82 feet.

ARTICLE 3. INDEMNIFICATION

3.1. Owner agrees to defend, indemnity and hold harmless City, its officers, officials and employees ("**Indemnified Group**") for liability from and against claims, damages, losses and expenses of any nature whatsoever (including but not limited to reasonable attorney fees, court costs, the costs of appellate proceedings, and all claim adjusting and handling expense), relating to, arising out of, resulting from or alleged to have resulted from the Owner's acts, errors, mistakes or omissions relating to any action or inaction of the Owner under this Agreement, including but not limited to work or services in the performance of this Agreement by any subcontractor or anyone directly or indirectly employed by or contracting with the Owner or a subcontractor or anyone for whose acts any of them may be liable.

3.2. If any claim, action or proceeding is brought against the Indemnified Group, by reason of any event that is the subject of this agreement, Owner (at its sole cost and expense) shall pay, resist or defend such claim or action on behalf of the Indemnified Group by the attorney of the Owner, or if covered by insurance, Owner's insurer, all of which must be approved by City, which approval shall not be unreasonably withheld or delayed. The City shall cooperate with all reasonable efforts in the handling and defense of such claim. Notwithstanding the foregoing, the City may engage its own attorney to defend or assist in its defense, and the Owner shall pay the reasonable costs and expenses thereof.

3.3. Any settlement of claims must fully release and discharge the Indemnified Group from any liability for such claims. The release and discharge shall be in writing and shall be subject to approval by the City, which approval shall not be unreasonably withheld or delayed. If Owner neglects or refuses to defend any of the Indemnified Group as required by this Agreement, any recovery or judgment against the Indemnified Group for a claim covered by this Agreement shall conclusively establish Owner's liability to the Indemnified Group in connection with such recovery or judgment. If the City desires to settle such dispute, the City shall be entitled to settle such dispute in good faith and Owner shall be liable for the amount of such settlement, and all expenses in connection with such settlement.

3.4. The indemnity provisions of this Agreement shall survive the termination of this Agreement.

ARTICLE 4. MEDIATION AND DEFAULT

4.1. Representatives. To further the cooperation of the parties in implementing this Agreement, the City and Owner each shall designate and appoint a representative to act as a liaison between the City and its various departments and the Owner. The initial representative for the City (the "**City Representative**") shall be the City Manager, and the initial representative for the Owner shall be its project manager, as identified by the Owner from time to time (the "**Developer Representative**"). The representatives shall be available at all reasonable times to discuss and review the performance of the parties to this Agreement and the development of the Property.

4.2. Mediation. In the event that there is a dispute hereunder which the parties cannot resolve between themselves, the parties agree that there shall be a forty-five (45) day moratorium on litigation during which time the parties agree to attempt to settle the dispute by nonbinding mediation before commencement of litigation. In the event that the parties cannot agree upon the selection of a mediator within seven (7) days, either party may request the presiding judge of the Superior Court of Yuma County to assign a mediator from a list of mediators maintained by the Arizona Municipal Risk Retention Pool.

4.3. Default. Failure or unreasonable delay be any party to perform any term or provision of this Agreement for a period of ten (10) days after written notice thereof from another party shall constitute a default under this Agreement. If the default is of a nature which is not capable of being cured within ten (10) days, the cure shall be commenced within such period, and diligently pursued to completion. The notice shall specify the nature of the alleged default and the manner in which the default may be satisfactorily cured. In the event of a default hereunder by any party, the non-defaulting party shall be entitled to all remedies at both law and in equity, including, without limitation, specific performance and the right to perform the obligation(s) of which the defaulting party is in default and to immediately seek reimbursement from the defaulting party of all sums expended in order to cure such default, together with interest on all such sums from the date said sums are expended by the non-defaulting party for the purpose of curing the default to the date such sums are paid in full.

ARTICLE 5. CONFLICT OF INTEREST; REPRESENTATIVES NOT INDIVIDUALLY LIABLE

5.1. Conflict of Interest. Pursuant to Arizona law, rules and regulations, no member, official or employee of the City shall have any personal interest, direct or indirect, in this Agreement, nor shall any such member, official or employee participate in any decision relating to this Agreement which affects his or her personal interest or

the interest of any corporation, partnership or association in which he or she is, directly or indirectly, interested. This agreement is subject to the provisions of A.R.S. §38-511.

5.2. No Personal Liability. No member, official or employee of the City shall be personally liable to Owner, or any successor or assignee, (a) in the event of any default or breach by the City, (b) for any amount which may become due to the Owner or its successor or assign, or (c) pursuant to any obligation of the City under the terms of this Agreement.

ARTICLE 6. MISCELLANOUS PROVISIONS

6.1. Notices. All notices and communications provided for herein, or given in connection herewith, shall be validly made if in writing and delivered personally or sent by registered or certified United States Postal Service mail, return receipt requested, postage prepaid to:

If to the City: City Manager
City of San Luis
P.O. Box 1170
1090 E. Union Street
San Luis, Arizona 85349

If to the Owner: Nieves Riedel, Riedel Holdings, L.L.C.
1964 E. Cesar Chavez Blvd., Suite 1
P O Box 1649
San Luis, Arizona 85349

or to such other addresses as either party may from time to time designate in writing and deliver in a like manner. Any such change of address notice shall be given at least ten (10) days before the date on which the change is to become effective. Notices given by mail shall be deemed delivered 72 hours following deposit in the United States Postal Service in the manner set forth above.

6.2. Waiver. No delay in exercising any right or remedy shall constitute a waiver thereof, and no waiver by the parties of the breach of any provision of this Agreement shall be construed as a waiver of any preceding or succeeding breach of the same or of any other provision of this Agreement.

6.3. Headings. The descriptive headings of the paragraphs of this Agreement are inserted for convenience only, and shall not control or affect the meaning or construction of any of the provisions of the Agreement.

6.4. Authority. The undersigned represent to each other that they have full power and authority to enter into this Agreement, and that all necessary actions have been taken to give full force and effect to this Agreement. The Owner represents and warrants that it is duly formed and validly existing under the laws of the State of Arizona and that it is duly qualified to do business in the State of Arizona and is in good standing

under applicable state laws. The Owner and the City warrant to each other that the individuals executing this Agreement on behalf of their respective parties are authorized and empowered to bind the party on whose behalf each individual is signing. The Owner represents to the City that by entering into this Agreement, the Owner has bound the Property and all persons and entities having any legal or equitable interest therein to the terms of the Agreement.

6.5. Amendment of the Agreement. This Agreement may be amended, in whole or in part and with respect to all or any portion of the Property, only with the mutual written consent of the parties to this Agreement or by their successors in interest or assigns. The City shall record the amendment or cancellation in the official records of the Yuma County Recorder.

6.6. Severability. If any other provision of the Agreement is declared void or unenforceable, such provision shall be severed from this Agreement, which shall otherwise remain in full force and effect.

6.7. Governing Law. The laws of the State of Arizona shall govern the interpretation and enforcement of this Agreement. The parties agree that venue for any action commenced in connection with this Agreement shall be proper only in a court of competent jurisdiction located in Yuma County, Arizona, and the parties hereby waive any right to object to such venue.

6.8. Recordation of Agreement and Subsequent Amendment; Cancellation. This Agreement, and any amendment or cancellation of it shall be recorded in the official records of the Yuma County Recorder no later than ten (10) days after the City and the Owner execute such agreement, amendment, or cancellation, as required by A.R.S. § 9-500.05.

6.9. Attorneys' Fees and Costs. If either party brings a legal action either because of a breach of this Agreement or to enforce a provision of this Agreement, the prevailing party will be entitled to reasonable attorneys' fees and court costs.

6.10. Notice of Conveyance or Assignment. The Owner shall give notice to the City of any sale of the entire Property at least ten (10) days prior to the effective date of the sale.

6.11. No Third-Party Beneficiaries. There are no third-party beneficiaries to this Agreement, and no person or entity not a party hereto shall have any right or cause of action hereunder.

6.12. No Agency Created. Nothing contained in this Agreement shall create any partnership, joint venture, or agency relationship between the parties.

6.13. Non-Liability of City Officials and Employees. Except for mandamus and other special actions, no member, official or employee 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 that may become due to the Owner or successor, or under any obligation under the terms of this Agreement.

6.14. Employment Eligibility, E-Verify

1. The Owner warrants his compliance with all federal immigration laws and regulations that relate to its employees and its compliance with A.R.S. § 23214, subsection A.
2. A breach of a warranty under paragraph 1 shall be deemed a material breach of the Agreement that is subject to penalties up to and including termination of the contract.
3. That the City retains the legal right to inspect the papers of any contractor or subcontractor employee who work on the Agreement to ensure that the contractor or subcontractor is complying with the warranty under paragraph 1.

6.15. Time is of the Essence. Time is of the essence of this agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

THE CITY OF SAN LUIS,
an Arizona municipal corporation

By: ACarrasco
Vice Mayor KMM

THE OWNER, Riedel Holding, L.L.C.

By: President
Its:

ATTEST:

By: Deputy City Clerk
City Clerk

APPROVED AS TO FORM:

Kay Marian Macuil
City Attorney

STATE OF ARIZONA)
) ss.
County of Yuma)

The foregoing instrument was acknowledged before me this 21st day of December 2021, by Africa Luna-Carrasco, Vice-Mayor of the City of San Luis, Arizona, a municipal corporation.

Angelica Cifuentes
Notary Public

My Commission Expires: 05-11-2023

Angelica Cifuentes
Notary Public - Arizona
Yuma County
Commission Number 562004
My Comm. Exp. 5/11/2023

STATE OF ARIZONA)
) ss.
County of Yuma)

The foregoing instrument was acknowledged before me this 22ND day of DECEMBER 2021, by NIEVES RIEDEL, on behalf of Riedel Holdings L.L.C., an Arizona Limited Liability Corporation.

Janet Taylor
Notary Public

My Commission Expires: 09/28/2025

Janet Taylor
Notary Public - Arizona
Yuma County
Commission Number 613060
My Comm. Exp. 9/28/2025

Exhibit 1

Los Mezquites Development Agreement

LOS MEZQUITES SUBDIVISION

DATE OF PREPARATION: NOVEMBER 2021 NUMBER OF LOTS: 897

MASTER PLAN LAYOUT

Parcel 227-11-005: A portion of the SW¼ of Section 14, Township 11 South Range 24 West. Except road right of way. **(108.91 acres)**

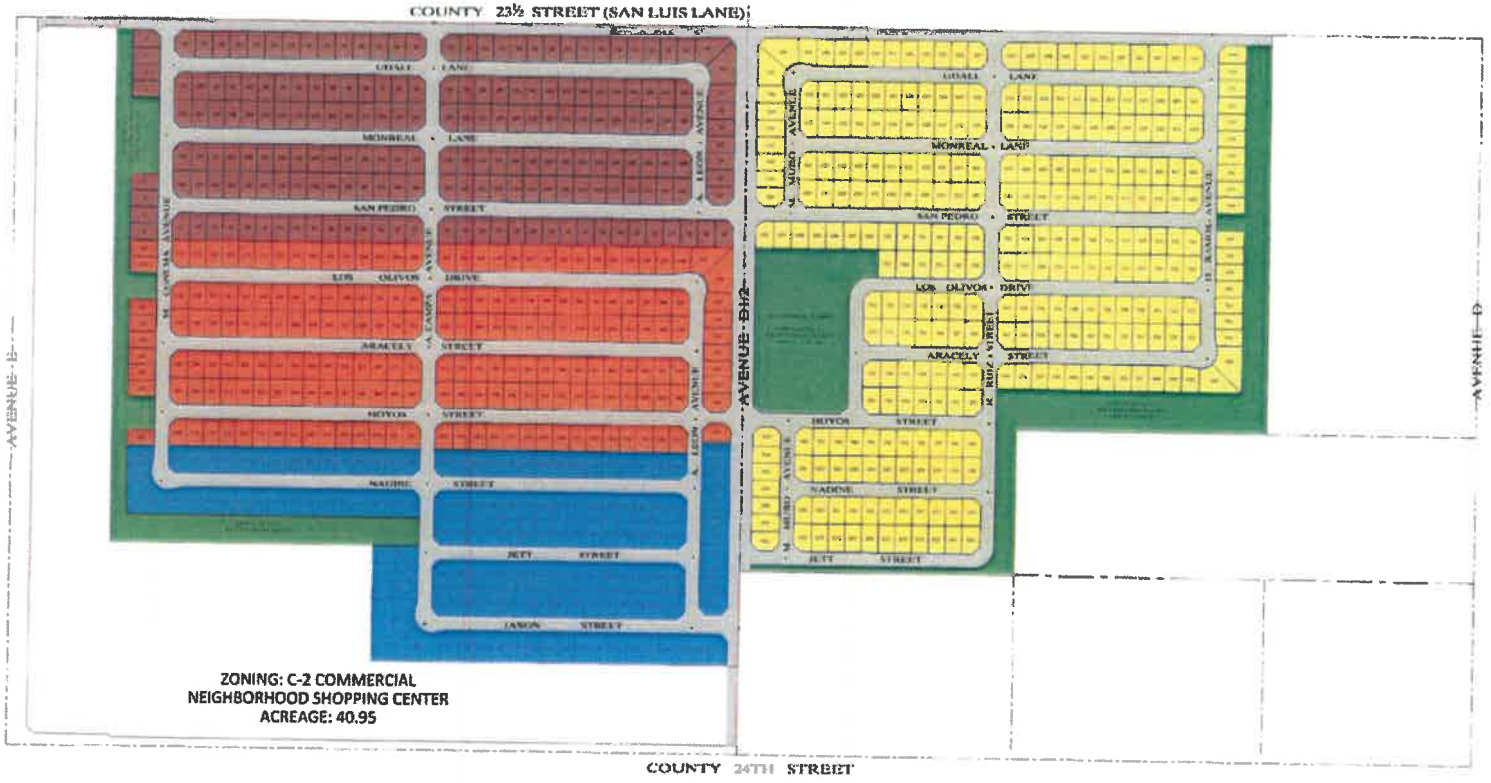
Parcel 227-11-004: South East ¼ of Section: 11 Township: 11S Range: 24W SE4 EXC THE E 751.25 FT OF N 1449.58 FT & EXC S 660 FT +/- & EXC THE E 1652.78 FT OF THE N 576.11 FT +/- OF S 1185.05 FT +/- **(74.64 acres)**

N

W E

S

SCALE: 1"=200'



PRELIMINARY
NOT FOR
CONSTRUCTION

January 5, 2022

SUBDIVISION CASE NUMBER: 2021-0751F

CASE SUMMARY: A request by Edais Engineering Inc., on behalf of Riedel Holdings LLC for the final plat approval for Los Mezquites Unit 1. This subdivision will contain 196 lots, in approximately 41.2 acres. The minimum lot size is 6,000 square feet. The property is located on the southeast corner of Avenue E and County 13 ½ Street (San Luis Lane) between Avenue E and Avenue D ½ Street (24th Avenue). PID # 227-11-005, San Luis, Arizona.

PUBLIC MEETING: February 8, 2022

COMMENTS DUE: January 15, 2022

Your comments on this case will help us prepare an accurate and timely staff report. Your comments on this case will be inserted "as is" into the staff report with your name, department, and telephone number, should the applicant have any questions. Your comments are a public record and will be available to the public, media, and the applicant, in addition to the Commission hearing this case. Please complete the section below and return via e-mail. For additional information, please contact the Planning and Zoning Department at (928) 341-8563 or at Fervillegas@sanluisaz.gov

Thank you,

Fernando Villegas
Principal Planner
Attachment: Location Map, Preliminary Plat and Master Plan

☑ COMMENTS ☐ NO COMMENTS

Enter Comments below:

The City of San Luis Fire Department has concerns regarding access to the subdivision, during development, and at full build out. This parcel is land locked without access from Avenue D ½ and Co.24th Street, and San Luis Lane is currently a single lane road, which will not provide adequate emergency access to the subdivision, if blocked by traffic. A second means of ingress/egress, to the entire project, will need to be provided for Fire Fighting tactics prior to construction. The City of San Luis Fire Department reserves the right to comment upon subsequent submittals.

Date:
01/12/2022
Agency:
The City of San Luis Fire Department
Phone:
928/341-8550
Return to: Fervillegas@sanluisaz.gov

January 5, 2022

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Your comments on this case will help us prepare an accurate and timely staff report. Your comments on this case will be inserted "as is" into the staff report with your name, department, and telephone number, should the applicant have any questions. Your comments are a public record and will be available to the public, media, and the applicant, in addition to the Commission hearing this case. Please complete the section below and return via e-mail. For additional information, please contact the Planning and Zoning Department at (928) 341-8563 or at Fervillegas@sanluisaz.gov

Thank you,

Fernando Villegas
Principal Planner
Attachment: Location Map, Preliminary Plat and Master Plan

☒ COMMENTS ☐ NO COMMENTS

Enter Comments below: ADOT Southwest District is requesting to review and comment on a Traffic Impact Analysis (TIA) for the proposed development. We would like to assess the

Date: potential impact the new development will have on the intersection of SR 195 & Ave E. Direct access to SR 195 from the development will not be permitted as this is an access-

Agency: controlled highway.

Phone: 1/12/22 ADOT Southwest District (928) 317-2159

Return to: Fervillegas@sanluisaz.gov

Re: Los Mezquites Final Plat-ADOT Southwest District Comments

Good morning, below are comments regarding the Los Mezquites Subdivision and Von Verde Development. Please contact me if you have any questions. Thank you.

1. The intersection of Ave E/ Cesar Chavez Blvd is recommended to have dual left turn lanes in the WB direction. However, the Synchro calculation still shows LOS F in the year 2031.
2. Intersection Ave E/ Cesar Chavez Blvd: The existing storage for the WBL is about 560' and EBR is about 580' as shown in the sketch attached. Please verify the storage length that is used in the Synchro model. It seems 250' is used for both turn lanes.
3. The turn lane design should follow ADOT TGP 430 to determine the storage/ gap and taper for the intersection of Ave E/ Cesar Chavez. Please verify table 20.
4. Please provide the recommendations that have the LOS D or better for the intersection of Ave E/ Cesar Chavez in the year 2031 and 2036.

Isabell Garcia
Development TES
Southwest District
P- (928) 317-2159
E-mail- IGarcia@azdot.gov

LOS MEZQUITES SUBDIVISION

DATE OF PREPARATION: NOVEMBER 2021 NUMBER OF LOTS: 854

MASTER PLAN LAYOUT

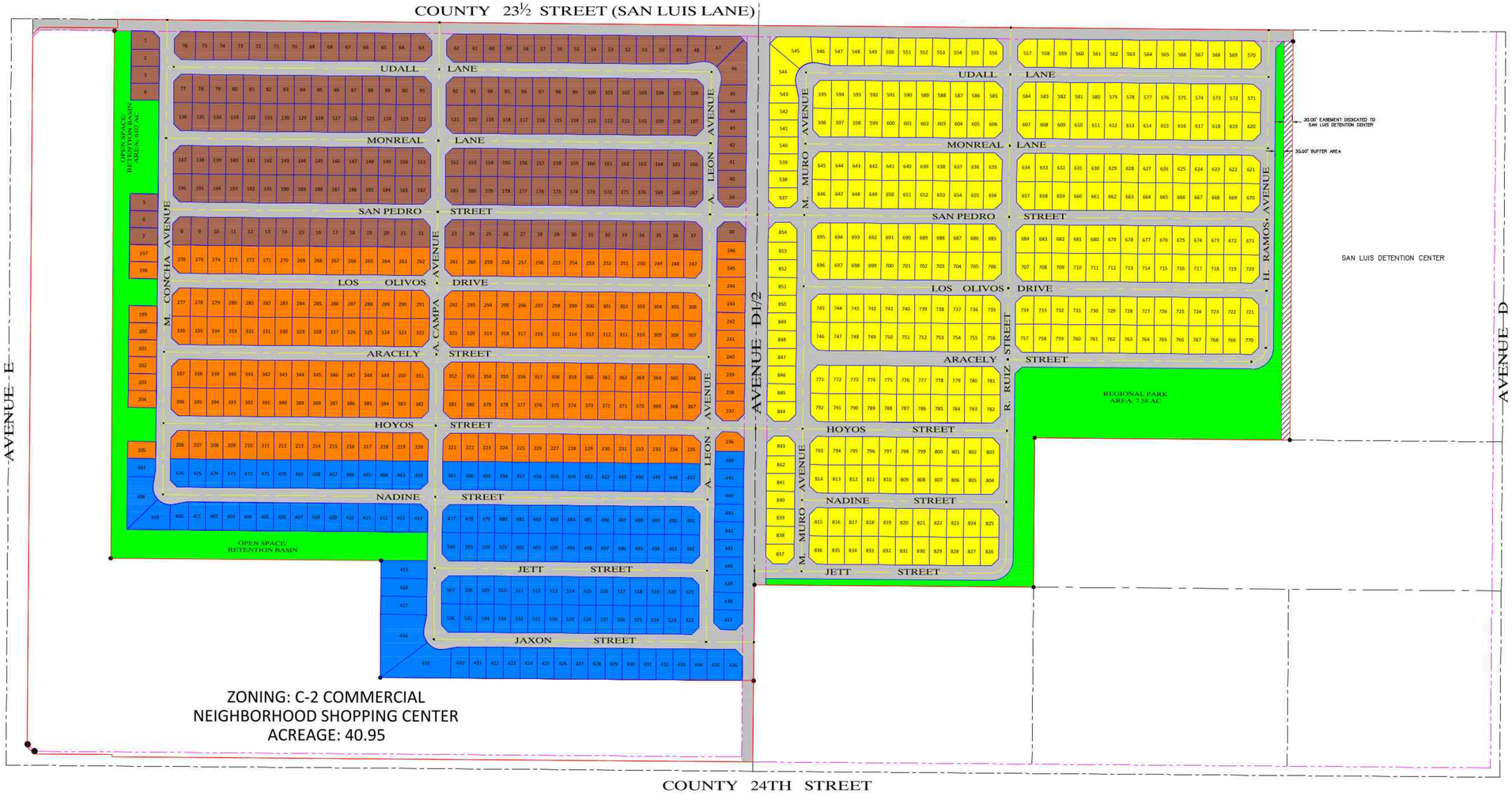
UNIT #
UNIT 1
UNIT 2
UNIT 3
UNIT 4

ACREAGE
RESIDENTIAL: 186.84 AC
COMMERCIAL: 40.95 AC
TOTAL : 227.79 AC

OPEN SPACE/RETENTION BASIN: 13.65 AC

N
W E
S

SCALE: 1"=200'



REVISIONS

1	
2	
3	
4	
5	
6	

PRELIMINARY LAYOUT

LOS MEZQUITES SUBDIVISION

EDAIS Engineering, Inc.
2076 S. Ave. 3E
Yuma, Arizona 85365
(928) 314-3068
majel@edaisgroup.com
www.edaisengineering.com

PRELIMINARY NOT FOR CONSTRUCTION

DATE: APR 2021
DRAWN: JAT
CHECKED: NKE
PROJECT: 21-028
SHEET NUMBER: 1

AGENDA ITEM REVIEW FORM

Regular City Council Meeting **6. D.**

Meeting Date: 03/09/2022

Department Head: Maria A Roldan, Acting Director of Parks & Recreation, Parks & Recreation Department

Submitted By: Crystal Fragozo, Administrative Assistant, Parks & Recreation Department

Action Requested:

ITEM:

Discussion and possible action on any and all matters regarding the purchase of playground equipment for the playground expansion of PPEP Park. **(Maria A. Roldan Acting Director of Parks and Recreation)**

SUMMARY:

The Parks and Recreation Department would like to expand the current playground area at the PPEP Park. The PPEP Park is visited by many residents on a daily basis. Staff would like to add new equipment to expand the current playground structures. Staff has reached out to Davebang Associates Inc. for assistance and requested a quote for playground equipment that can be added to the current playground structure. Staff have worked with Davebang Associates Inc. for many years and have purchased various playground equipment for the city parks, including PPEP Park. Davebang Associates Inc. has quoted a unity slide climber, unity dome, play cubes, and cone spinner w/floor. Staff believes that these new additions will be great and highly favored by the children attending the PPEP Park. It will be a new look for the park and will have new playground sets that children can use and play on. Staff budgeted for playground equipment for the playground expansion of the PPEP Park, and it was approved as a CIP item for this Fiscal Year.

Davebang Associates Inc. is part of the Mohave State Contracts cooperative purchasing and the quote for all these items is a total of $53,994.91. City Code-Purchasing §3.05.090 allows for cooperative purchasing, ensuring that the city is getting the best prices in the market.

Staff would like to seek approval from Mayor and city council to move forward with the ordering process. Due to many shipment issues going on in the market, staff would like to order the equipment in a timely manner to avoid any shipment delays. Staff would like to be able to include the new equipment before the end of the fiscal year. Staff is open to any recommendations or directions Mayor and city council may have in regard

to this purchase.

RECOMMENDATION / SUGGESTED MOTION:

I MOVE TO APPROVE THE COOPERATIVE PURCHASE OF PLAYGROUND EQUIPMENT FOR PPEP PARK IN THE AMOUNT OF $53,994.91 AS PRESENTED.

Fiscal Impact

IS THERE FISCAL IMPACT ASSOCIATED WITH THIS ITEM:	YES
CITY/STATE/FEDERAL FUNDS:	CITY
TOTAL:	$53,994.91
BUDGETED AMOUNT:	$58,000.00
AVAILABLE AMOUNT TO TRANSFER:	N/A
ACCT NAME & GL#/REMAINING BALANCE BEFORE PURCHASE:	CAPITAL OUTLAY - EQUIPMENT - 100-999-90000 /

FISCAL IMPACT STATEMENT (IF THIS IS A BUDGET TRANSFER, YOU MUST ATTACH THE BUDGET ADJUSTMENT FORM):

The purchase of playground structure additions for the PPEP Park was budgeted and approved as a CIP item for the current Fiscal Year 22. The items mentioned on the attached quote were submitted for approval and approved under the CIP line item: Structure Option 1 - Play cubes 4.0 with transition climber.

Attachments

Dave Bang Associates Quote - PPEP Park Playground Structure Expansion

---

Estimate

AZ124207

To: **City of San Luis**
Attn: Omar Valazquez
965 N. Park Avenue
San Luis, AZ 85349

Estimate Date	Salesperson
02/11/2022	Andrew Ross

Pepp Park Expansion Equipment

Estimated Shipping Date	Shipped Via	FOB	Terms
14-18 Weeks	Truck - AZ	San Luis	Net 30 Mohave #190-BANG-0221

Quantity	Description	Unit Price	Total Extended
1	Playworld # ZZXX0346 UNITY SLIDE CLIMBER	$13,922.00	$13,922.00
	**Playworld Promotion Sale Pricing - Total savings of $2,784.00		
1	Playworld # ZZXX0366 UNITY DOME	$18,708.00	$18,708.00
	**Playworld Promotion Sale Pricing - Total savings of $3,742.00		
	Subtotal		$32,630.00
	Less Special 2022 Playworld Sale Discount		($6,526.00)
1	Playworld # PLAYCUBES-4 4.0	$13,738.00	$13,738.00
1	Playworld # ZZXX0911 CONE SPINNER W/ FLOOR	$13,944.00	$13,944.00
	Subtotal		$27,682.00
	Less Mohave Discount on Playworld		($4,982.76)
1	Playworld Shipping	$1,141.00	$1,141.00
	**Playworld Promotion Sale Pricing valid until June 30 2022 - Total savings included above is $6,526.00		
	**Playworld Promotion Shipping Sale Pricing valid until June 30 2022 - Total savings included above is $6,085.00		

THIS ESTIMATE IS SUBJECT TO THE ATTACHED TERMS AND CONDITIONS	**Subtotal**	$49,944.24
THANK YOU FOR THIS CHANCE TO ESTIMATE	**Tax (8.3%)**	$4,050.67
Dave Bang Associate, INC. IS PLEASED TO SUBMIT THE ABOVE ESTIMATE FOR YOUR CONSIDERATION. SHOULD YOU PLACE AN ORDER, BE ASSURED IT WILL RECEIVE OUR PROMPT ATTENTION. THIS ESTIMATE IS SUBJECT TO THE ATTACHED TERMS AND CONDITIONS, AND IS VALID FOR 30 DAYS. THEREAFTER, IT IS SUBJECT TO CHANGE WITHOUT NOTICE.	**Total**	$53,994.91

Accepted By
Print Name: _____ Signature: _____ Date: _____

PLEASE SIGN AND RETURN ONE COPY WHEN ORDERING. ***THANK YOU!***

Terms & Conditions

1. General Notes

*Assembly and Installation NOT included unless otherwise noted

*For AZ M.R.R.A. Projects ONLY, price includes any tax that was paid at the Point of Purchase unless otherwise noted.

*Tax NOT included unless otherwise noted - Tax will be added to your invoice if approved exemption certificate is not received by product ship date.

*Customer responsible for quoted quantities and model numbers, please check!

*Payment and Performance bonds are NOT included unless otherwise stated. If required, additional charges of 3% to quote total will apply.

*Price reflects quoted quantity. Please request revision if alternate quantity is desired.

2. Payment / Ordering

*TO ORDER, please sign quote and return via email or fax to avoid any shipping delays. Fax or email copy deemed to be legal equivalent of original. If Payment with Order is required, please sign quote below and return with payment. All past due accounts subject to 1 ½% monthly finance charge. In the event legal action is required to effect collection venue shall be Mesa, AZ.

3. Shipping / Unloading

*Shipped by Common Carrier – Customer will need 2-4 people to unload. Liftgate NOT included. Items will be boxed and / or stretch wrapped to pallets and customer is responsible for offloading. Delivery Drivers do NOT unload

**IMPORTANT: Customer is responsible for receiving and checking quantities and condition at time of delivery - Please note any shortages or damages on delivery copy.

*Equipment will ship to Dave Bang Associates yard in Mesa, AZ. If installation was purchased, the installers will deliver to site at the time of installation. Please request an updated or revised quote if any of the equipment will ship elsewhere.

*If quoted, Will Call Pick up address and times are:

Dave Bang Associates, Inc.

140 N. Gilbert Road, Mesa, AZ 85203

Appointments Required: Monday-Friday from 8:00am to 2:00pm

*Notwithstanding anything to the contrary in any Contract Documents, Customer understands that estimated shipment times for materials are an estimate only. We have no control over shipment dates. We thus make no guarantee to Owner or Customer regarding the projected shipment dates for materials and shall not be liable for any loss caused by the timing of shipments

4. Engineered Wood Fiber

*NOTE: Some Engineered Wood Fiber will be left outside play area after installation if installation has been purchased

*Customer to provide access for Engineered Wood Fiber delivery with tractor truck and 53’ trailer.

*Compaction of the Engineered Wood Fiber is NOT included in the installation cost, if desired, please request an updated proposal. If Compaction of the Engineered Wood Fiber was purchased, a high capacity water source such as a hydrant must be available. If applicable, the cost of a meter and / or the cost of the water is NOT included in the proposal. If we need to acquire the meter and / or pay for the water, please request an updated proposal.

5. General Notes for Purchased Installation

*Installation does NOT include ground preparation, excavation, safety surfacing, and/or safety surfacing borders, prep work, flat work, grading, rerouting of water, electric, drainage or sprinkler lines unless otherwise noted in the proposal

*Demo of existing equipment or safety surfacing is NOT included unless otherwise stated in the proposal

*ROCK CLAUSE: Pricing is based on normal soil conditions which would allow an auger on a tractor to dig footings. If rocks/boulders interfere with the progress of the excavation, additional fees may apply.

*ACCESS CLAUSE: Installation based on clear access to area. Crane service is NOT included. Customer to provide access for bobcat to work area, bobcat will be provided by installer. Minimum access shall be 7’ wide and 7’ high. If adequate access is not provided additional charges may apply and repairs to landscape and irrigation may be required. Customer is responsible for any repairs to landscape if proper access is not provided.

*UTILITY CLAUSE: Installation to include marking of utilities by Blue Stake. Blue Stake CANNOT locate any private lines, PVC or plastic water lines. Installation does NOT include repair or relocating any underground utilities, such as drainage, irrigation, live water lines, main low voltage lines, gas, electrical, communication, or sewer etc. Customers responsibility to provide locations of any utilities prior to commencement of work.

*Customer is responsible for all landscape repairs such as, but not limited to damaged trees, bushes, lawn, curbing, sidewalks and/or asphalt paving caused by materials truck and/or 2-ton bobcat needed to complete project.

*Before we proceed with the playground installation, the playground area MUST be compacted, be free of debris, and excavated accordingly. Please call for details.

*Concrete pad for surface mount items NOT included and MUST be provided by customer unless otherwise stated.

*Surface mount anchoring to asphalt and paver areas is NOT included unless otherwise stated.

*Private Utility Locator is NOT included unless otherwise noted. Private Utility Locator CANNOT locate any PVC or plastic water lines

*Installation does NOT include saw cutting and/or core drilling unless otherwise noted

*Installation does NOT include jackhammering. Please call for details.

*Area MUST have normal soil conditions and be level.

*All Athletic Equipment Goals such as soccer, football, etc, install location MUST be marked out by customer prior to installation, if installation was purchased

6. Temporary Fencing

*Security guards and/or temporary fencing to prevent injuries, vandalism and/or accidental damage to install area or to the rubberized surface while it sets is NOT included unless noted on quote. If desired, the installers can put up caution tape, but Temporary Fencing is recommended. Although the fencing, if provided, is intended to provide this security, the overall security of the property is ultimately the responsibility of customer. We are not responsible for any vandalism or injuries even with the provision of the fencing.

7. ADA Access

*Play Equipment MUST be installed over an impact-absorbing surface such as ADA compliant Engineered Wood Fiber or Rubber Surfacing. If not quoted, please call for details.

*This area is NOT ADA compliant without the installation of compliant surfacing and an accessible route up to and into the playground area. Please call for details.

8. Poured-in-Place Rubber Surfacing

*Rubber Surfacing cure time is normally 48-72 hours and can vary depending on weather conditions.

*Rubber Surfacing cannot be installed during extreme weather conditions and may also not be installed if rain or frost is forecast during the cure time.

*48-Hour Manned Security is NOT included for rubber unless otherwise noted.

9. Ramada / Shade Shelters

*Ramada / Shade Shelter installation price EXCLUDES – unless otherwise stated in this quote - engineering, permits, permit submittal, site plans, special inspections, soil reports, impact fees, special assessment fees. Customer is responsible for any and all of these items if required by the City.

*Ramada / Shade Shelter manufacture time is 6-8 weeks. Permitting can add 2-4 weeks or more to lead time. PLEASE NOTE: Shade Orders are NOT released into production until permit is issued!

*Ramada / Shade Shelter installation price EXCLUDES concrete pad, footings, masonry columns, electrical wiring and lights unless otherwise noted.

10. Prevailing Wages

*Prevailing Wages NOT included unless otherwise noted. (ie: Davis Bacon, TERO, ect.) If this is a Prevailing Wage project, please request alternate pricing.

*If Prevailing Wages / Davis Bacon Wages were INCLUDED, all other special work fees NOT included - Additional Labor Charges may apply if alternate labor is required.

11. Stock Items

*DBA Stock Item(s): Model number and color based on availability at time of order – taken from Scratch & Dent / Overstock - sold AS IS with NO warranty. Photo (s) of stock item(s) available upon request at the time of order.

12. Indemnity Provision

*Notwithstanding anything to the contrary in any Contract Documents we shall have no duty to defend or indemnify Owner, Customer, or any other party we agree to defend or indemnify in any Contract Documents for that portion of any claim arising out of the comparative fault of any party we agree to defend or indemnify in any Contract Documents.

13. Insurance

Available Insurance

Umbrella / Excess Liability:

Each Occurrence - $2,000,000.00

Aggregate - $2,000,000.00

General Liability Limits:

Deductible - $2,500.00

Each Occurrence - $1,000,000.00

Damage to Rented Premises - $100,000.00

Medical Expense - $5,000.00

Personal & Adv Injury - $1,000,000.00

General Aggregate (per project) - $2,000,000.00
Products Comp/OP Agg - $2,000,000.00
Excludes Contractual Liability
Available Endorsements:
Additional Insured Ongoing Operations CG2010
Additional Insured Completed Operations CG 2037
Primary Noncontributory IFG-G-0094
Waiver of Subrogation CG 2404
Per Project Aggregate IFG-G-0065
Per Location Aggregate IFG-G-0064
Auto Liability Limits:
(Any Auto, Hired Autos, Non-Owned Autos)
Combined Single Limit $1,000,000.00
Available Endorsements:
Auto Blanket Additional Insured/Waiver of Subrogation CAT353
Workers Compensation and Employers Liability:
Each Accident - $1,000,000.00
Disease (Ea Employee) - $1,000,000.00
Disease (Policy Limit) - $1,000,000.00
Waiver of Subrogation Endorsement available upon request
AZ WC000313

Initial: _____

Unity® Slide Climber

ZZXX0346 • AGES: 5-12

- The thrill of a slide and so much more!
- Three different climbers for a variety of challenge levels
- Tube at the top is entry to slide and a gathering point
- Children use the space underneath to socialize and play games

Nuvo™ 360° Spiral Slide

ZZXX0630 • AGES: 2-12

- Corkscrew slide features a one-piece bedway and canopy with molded-in handhold
- Graceful curves and swirls match Nuvo style
- Deck height is 6' (1,83m)

Twist and Shout Slide

ZZCH2728 • AGES: 2-12

- Curved, textured bedways give a thrilling side-to-side motion
- Deck height is 4' (1,22m)

Rumble Seat Slide

ZZCH2738 • AGES: 2-12

- Bumpy slide helps build multi-sensory awareness
- Deck height is 5' (1,52m)

Boulder Hill Slide

CB-1300 • AGES: 2-12

- Build a slide into your site's landscape for the ultimate wow factor
- Bring the fun of sliding into the natural setting, featuring a boulder entrance
- Slide is segmented for design flexibility; choose from hundreds of configurations

Glide Slide

ZZCH3536 • AGES: 2-12

- Durable one-piece design
- Available from three deck heights: 4' (1,22m, shown), 5' (1,52m), and 6' (1,83m)

PRODUCT	ITEM	SPACE REQUIRED	FALL HEIGHT	USERS	INSTALL HOURS	WEIGHT	ADA	ASTM F1487	CPSC PUB.325	CAN/CSA Z614	EN1176
Unity® Slide Climber	ZZXX0346	33' 11" x 19' 7" (10,33m x 5,96m)	8' 7" (2,62m)	10	12	896 lbs (407 kg)	•	•	•	•	•
Nuvo™ 360° Spiral Slide	ZZXX0630	22' 10" x 17' 5" (6,96m x 5,31m)	6' 0" (1,83m)	4	8	900 lbs (409 kg)	•	•	•	+	+
Twist and Shout Slide	ZZCH2728	24' 11" x 16' 2" (7,6m x 4,93m)	4' 0" (1,22m)	6	8	475 lbs (216 kg)	•	•	•	+	+
Rumble Seat Slide	ZZCH2738	25' 2" x 16' 5" (7,67m x 5m)	5' 0" (1,52m)	6	8	504 lbs (229 kg)	•	•	•	+	+
Boulder Hill Slide	CB-1300	29' 8" x 15' 4" (9,04m x 4,67m)	7' 0" (2,13m)	9	6	1211 lbs (549 kg)	•	•	•	•	•
Glide Slide	ZZCH3536	24' 6" x 15' 2" (7,48m x 4,61m)	4' 0" (1,22m)	4	6	384 lbs (174 kg)	•	•	•	+	•

+CSA and EN compliant versions available.
All play equipment must be installed over an appropriate impact absorbing surface that complies with ASTM or CSA standards. See your Playworld representative for more information.

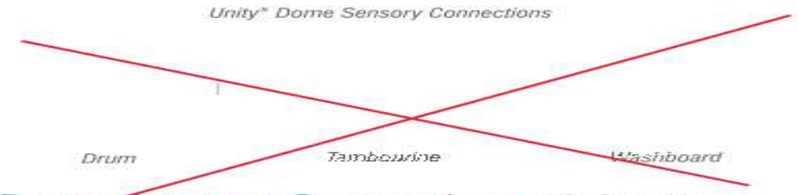
Climbers: Unity®
Freestanding Products

Shown with optional Sensory Connections (sold separately)

Dome AGES: 5-12
ZZXX0366

- A play experience that brings everyone together
- Play in, on, and around
- Unique rings and rungs create new adventures and climbing challenges
- Perch points create special destinations
- Accessible for children in wheelchairs for more inclusive play
- Net tube climber inside creates different climbing experience

**U.S. Patent D729,224S*



Dome Sensory Connections AGES: 5-12
ZZXX0367

Rushmore™ AGES: 5-12
ZZXX0183

- An exclusive play element that provides flexible climbing and inventive, imaginative play, as if playing on a hill
- Kids can jump, crawl, walk, roll, or rest
- Prompts creativity and teamwork
- Weave into the "cave" underneath the flex treads and relax on the sling seats
- Flex treads go all the way to the ground, making it inclusive
- Flex treads provide superior strength while maintaining the perfect amount of flexibility

Description	Item Number	Ages	Space Required	Size	Fall Height	Play Events	Child Capacity*	Install Hours	Weight	ADA	ASTM F1487	CPSC Pub.325	CAN/CSA-Z614	EN1176
Unity® Dome	ZZXX0366	5-12	27' 0" x 27' 0" (8,23m x 8,23m)	15' 0" x 15' 0" x 7' 0" (4,57m x 4,57m x 2,13m)	7' 0" (2,13m)	1	17	20	607 lbs (276 kg)	-	-	-	-	-
Unity® Dome Sensory Connections	ZZXX0367	5-12	—	2' 6" x 0' 0" x 2' 6" (0,76m x 0m x 0,76m)	—	3	3	1.5	76 lbs (35 kg)	-	-	-	-	-
Unity® Rushmore™	ZZXX0183	5-12	24' 8" x 29' 1" (7,51m x 8,86m)	14' 3" x 17' 1" x 8' 9" (4,35m x 5,2m x 2,68m)	4' 0" (1,22m)	1	18	28	1171 lbs (531 kg)	-	-	-	-	-

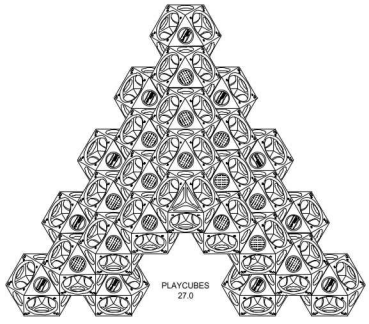
**Child capacity numbers provided for your reference using our professional judgment as no current industry standard exists.*
All play equipment must be installed over an impact-absorbing surface. +CSA and EN compliant versions available. See your Playworld representative for more information.

PlayCubes® 1.0M

PLAYCUBES-1M • AGES: 2-12

PlayCubes® 4.0

PLAYCUBES-4 • AGES: 5-12
SPACE REQUIRED: 22' 0" X 20' 8"



PlayCubes® 27.0

PLAYCUBES-27 • AGES: 5-12
SPACE REQUIRED: 37' 0" X 33' 8"

PRODUCT	ITEM	SPACE REQUIRED	SIZE	FALL HEIGHT	EVENTS	USERS	INSTALL HOURS	WEIGHT	ADA	ASTM F1487	CPSC PUB.325	CAN/CSA Z614	EN1176
PlayCubes® 1.0M (Metal)	PLAYCUBES-1M	16' 4" x 17' 0" (4,98m x 5,18m)	4' 4" x 4' 11" x 4' 2" (1,32m x 1,5m x 1,27m)	4' 2" (1,27m)	1	4	3	335 lbs (152 kg)	•	•	•	•	•
PlayCubes® 1.0	PLAYCUBES-1	16' 4" x 16' 11" (4,98m x 5,16m)	4' 4" x 4' 11" x 4' 1" (1,32m x 1,5m x 1,24m)	4' 1" (1,24m)	1	4	2	153 lbs (70 kg)	•	•	•	•	•
PlayCubes® 4.0M (Metal)	PLAYCUBES-4M	22' 0" x 20' 8" (6,71m x 6,3m)	9' 11" x 8' 8" x 6' 2" (3,02m x 2,64m x 1,88m)	6' 2" (1,88m)	4	15	10	1242 lbs (563 kg)	•	•	•	•	•
PlayCubes® 4.0	PLAYCUBES-4	22' 0" x 20' 8" (6,71m x 6,3m)	9' 11" x 8' 8" x 6' 2" (3,02m x 2,64m x 1,88m)	6' 2" (1,88m)	4	15	6	556 lbs (252 kg)	•	•	•	•	+
PlayCubes® 27.0	PLAYCUBES-27	37' 0" x 33' 8" (11,28m x 10,26m)	24' 11" x 21' 7" x 12' 10" (7,6m x 6,58m x 3,91m)	10' 5" (3,18m)	27	92	41	3308 lbs (1501 kg)	•	•	•	•	

All playgrounds shown are in-ground mount and available as surface mount. Additional ground level components may be required for ADA and ASTM compliance.

Cone Spinners

Cone Spinners combine the excitement of spinning with the challenge of climbing for an exhilarating play experience! Cone Spinners let many children play at once in an exciting event that combines the thrill of speed and the wonder of height with net play.

Cone Spinner

ZZXX0912 • AGES: 5-12

Cone Spinner Double-Decker

ZZXX0914 • AGES: 5-12

Cone Spinner Diamond

ZZXX0913 • AGES: 5-12

Cone Spinner w/ Floor

ZZXX0911 • AGES: 5-12

PRODUCT	ITEM	SPACE REQUIRED	FALL HEIGHT	USERS	INSTALL HOURS	WEIGHT	ADA	ASTM F1487	CPSC PUB.325	CAN/CSA Z614	EN1176
Cone Spinner	ZZXX0912	18' 10" x 18' 10" (5,74m x 5,74m)	5' 2" (1,58m)	7	6	205 lbs (93 kg)	•	•	•	•	•
Cone Spinner Double-Decker	ZZXX0914	19' 10" x 19' 10" (6,04m x 6,04m)	9' 4" (2,83m)	14	10	522 lbs (237 kg)	•	•	•	•	•
Cone Spinner Diamond	ZZXX0913	18' 10" x 18' 10" (5,74m x 5,74m)	8' 6" (2,59m)	12	8	259 lbs (118 kg)	•	•	•	•	•
Cone Spinner w/ Floor	ZZXX0911	18' 10" x 18' 10" (5,74m x 5,74m)	5' 0" (1,52m)	7	9	367 lbs (167 kg)	•	•	•	•	•