MARANA TOWN COUNCIL - AMENDED
REGULAR COUNCIL MEETING
NOTICE AND AGENDA
11555 W. Civic Center Drive, Marana, Arizona 85653
Council Chambers, August 3, 2022, at or after 6:00 PM

Ed Honea, Mayor
Jon Post, Vice Mayor
Patti Comerford, Council Member
Jackie Craig, Council Member
Herb Kai, Council Member
John Officer, Council Member
Roxanne Ziegler, Council Member

Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the Marana Town Council and to the general public that the Town Council will hold a meeting open to the public on August 3, 2022, at or after 6:00 PM located in the Council Chambers of the Marana Municipal Complex, 11555 W. Civic Center Drive, Marana, Arizona.

ACTION MAY BE TAKEN BY THE COUNCIL ON ANY ITEM LISTED ON THIS AGENDA. Revisions to the agenda can occur up to 24 hours prior to the meeting. Revised agenda items appear in *italics*.

As a courtesy to others, please turn off or put in silent mode all electronic devices.

Meeting Times
Welcome to this Marana Town Council meeting. Regular Council meetings are usually held the first and third Tuesday of each month at 6:00 PM at the Marana Municipal Complex, although the date or time may change and additional meetings may be called at other times and/or places. Contact the Town Clerk or watch for posted agendas for other meetings. This agenda may be revised up to 24 hours prior to the meeting. In such a case a new agenda will be posted in place of this agenda.

Speaking at Meetings
If you are interested in speaking to the Council during the Call to the Public or Public Hearings, you must fill out a speaker card (located in the lobby outside the Council Chambers) and deliver it to the Town Clerk prior to the convening of the meeting.

All persons attending the Council meeting, whether speaking to the Council or not, are expected to observe the Council rules, as well as the rules of politeness, propriety, decorum and good conduct. Any person interfering with the meeting in any way, or acting rudely or loudly will be removed from the meeting and will not be allowed to return.

Accessibility
To better serve the citizens of Marana and others attending our meetings, the Council Chambers are wheelchair and handicapped accessible. Persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting the Town Clerk at (520) 382-1999. Requests should be made as early as possible to arrange the accommodation.

Agendas
Copies of the agenda are available the day of the meeting in the lobby outside the Council Chambers or online at www.maranaaz.gov under Agendas and Minutes. For questions about the Council meetings, special services or procedures, please contact the Town Clerk, at (520) 382-1999, Monday through Friday from 8:00 AM to 5:00 PM.

This Notice and Agenda Posted no later than 24 hours prior to the meeting, at the Marana Municipal Complex, 11555 W. Civic Center Drive, the Marana Operations Center, 5100 W. Ina Road, and at www.maranaaz.gov under Agendas and Minutes.

REGULAR COUNCIL MEETING

CALL TO ORDER AND ROLL CALL

PLEDGE OF ALLEGIANCE/INVOCATION/MOMENT OF SILENCE

APPROVAL OF AGENDA

CALL TO THE PUBLIC
At this time any member of the public is allowed to address the Town Council on any issue within the jurisdiction of the Town Council, except for items scheduled for a Public Hearing at this meeting. The speaker may have up to three minutes to speak. Any persons wishing to address the Council must complete a speaker card located outside the Council Chambers and deliver it to the Town Clerk prior to the commencement of the meeting. Individuals addressing a meeting at the Call to the Public will not be provided with electronic technology capabilities beyond the existing voice amplification and recording capabilities in the facilities. Pursuant to the Arizona Open Meeting Law, at the conclusion of Call to the Public, individual members of the Council may respond to criticism made by those who have addressed the Council, and may ask staff to review the matter, or may ask that the matter be placed on a

future agenda.

PROCLAMATIONS

PR1 Proclamation recognizing August 2022 as, "Drowning Impact Awareness Month" (Cherry L. Lawson)

MAYOR AND COUNCIL REPORTS: SUMMARY OF CURRENT EVENTS

MANAGER'S REPORT: SUMMARY OF CURRENT EVENTS

PRESENTATIONS

P1 Relating to Intergovernmental Relations; presentation on the results and activities of the 55th Arizona State Legislative Second Regular Session; including a look forward to the upcoming Arizona State Legislative Session (Andrea Caicedo)

CONSENT AGENDA

The Consent Agenda contains items requiring action by the Council which are generally routine items not requiring Council discussion. A single motion and affirmative vote will approve all items on the Consent Agenda, including any resolutions or ordinances. Prior to a motion to approve the Consent Agenda, any Council member may remove any item from the Consent Agenda and that item will be discussed and voted upon separately.

C1 Resolution No. 2022-075: Relating to Development; approving a Final Plat for Saguaro Reserve II at Dove Mountain, Lots 1-292, Blocks "1" - "4" (Future Residential), Block "5" (Golf Course) and Common Areas "A" (Private Streets) and "B" (Open Space / Drainage) located north of Dove Mountain Boulevard and east of Dove Reserve Drive within Sections 16 and 21, Township 11 South and Range 12 East (Brian D. Varney)

C2 Resolution No. 2022-076: Relating to Development; approving a Final Plat for Little Lambert, Lots 1-5 and Common Area "A" (Private Street) located north of Lambert Lane and approximately one-half mile west of Camino de Oeste within Section 12, Township 12 South and Range 12 East (Brian D. Varney)

C3 Relating to Procurement; ratifying the Town Manager's approval of change orders to the Airport MIRL, PAPI, & Beacon Replacement (AP026) project in the amount of $178,000.49; authorizing the transfer of appropriations, if necessary, for the change orders; and authorizing the Town Manager or designee to execute the necessary documents to effectuate the change orders (Fausto Burruel)

C4 *Resolution No. 2022-079: Relating to the Marana Regional Airport; approving and authorizing the Town Manager to execute an Airport Development Reimbursable Grant Agreement in the amount of $45,000.00 between the State of Arizona, by and through the Department of Transportation (ADOT), and the Town of Marana for the purpose of aiding in financing the "Master Plan ALP Update" project (Grant No. E3S2L 01P) (Kristin Taft)*

C5 *Resolution No. 2022-080: Relating to Permanent Base Adjustment; authorizing Town staff to transmit a copy of the publicity pamphlet for the Town's permanent base adjustment ballot measure to the Arizona Auditor General, and to carry out all other actions necessary or prudent to comply with election laws and regulations (David Udall)*

C6 Approval of the Council Special Meeting Summary Minutes of July 12, 2022 (Cherry L. Lawson)

LIQUOR LICENSES

BOARDS, COMMISSIONS AND COMMITTEES

COUNCIL ACTION

A1 PUBLIC HEARING: Ordinance No. 2022.011: Relating To Transaction Privilege Tax; amending Marana Ordinance No. 2021.022 to exempt the sale of Manufactured Buildings, pursuant to Town Tax Code Section 8-427, from the one-half cent tax increase approved by Ordinance No. 2021.022; and designating an effective date (Yiannis Kalaitzidis)

A2 PUBLIC HEARING: Relating to Development; public hearing regarding Land Use Assumptions and Infrastructure Improvements Plans related to the Town's 2022 Development Impact Fees for Roads, Parks, Water, and Wastewater Capital Infrastructure (Fausto Burruel)

A3 Resolution No. 2022-077: Relating to Real Estate; approving and authorizing the Town Engineer to execute an Easement Amendment and an Easement Encroachment Agreement with El Paso Natural Gas Company (EPNG) specifying EPNG's consent for dedicated public improvements encroaching inside the gas line easement within the Saguaro Bloom subdivision (George Cardieri)

A4 Resolution No. 2022-078: Relating to Development; approving and authorizing the Mayor to execute the First Amendment to Rancho Marana Development Agreement between the Town of Marana and Meritage Homes of Arizona, Inc. (Jane Fairall)

ITEMS FOR DISCUSSION / POSSIBLE ACTION

D1 Relating to Development and Public Works; update, discussion, and possible direction regarding public and private projects and development applications on the Town's Marana Current and Proposed Projects internet site (Jason Angell)

EXECUTIVE SESSIONS

Pursuant to A.R.S. § 38-431.03, the Town Council may vote to go into executive session, which will not be open to the public, to discuss certain matters.

E1 Executive Session pursuant to A.R.S. §38-431.03 (A), Council may ask for discussion or consideration, or consultation with designated Town representatives, or consultation for legal advice with the Town Attorney, concerning any matter listed on this agenda for any of the reasons listed in A.R.S. §38-431.03 (A).

FUTURE AGENDA ITEMS

Notwithstanding the Mayor's discretion regarding the items to be placed on the agenda, if three or more Council members request that an item be placed on the agenda, it must be placed on the agenda for the second regular Town Council meeting after the date of the request, pursuant to Marana Town Code Section 2-4-2(B).

ADJOURNMENT

Council-Regular Meeting **PR1**

Meeting Date: 08/03/2022

From: Cherry L. Lawson, Town Clerk

Date: August 3, 2022

Subject: Proclamation recognizing August 2022 as, "Drowning Impact Awareness Month" (Cherry L. Lawson)

Attachments

Proclamation Drowning Impact Awareness Month

MARANA AZ
ESTABLISHED 1977

PROCLAMATION
Declaring August 2022 as "Drowning Impact Awareness Month"

WHEREAS, Arizona's future prosperity depends upon the long-term health, safety, and well-being of the nearly two million children and teens in our state; and

WHEREAS, drowning is a top cause of injury and death for children and teens in Arizona, affecting not only the victims, but also families, emergency personnel, and our society as a whole; and

WHEREAS, child drownings are nearly 100 percent preventable; and

WHEREAS, research-proven strategies can save lives, including constant and capable supervision, restricting access to water, using life jackets, swimming lessons for adults and children at the appropriate age, and rapid emergency response, including CPR; and

WHEREAS, awareness of the problem is just the first step; evidence-based programs to bring these strategies to families is the best way to save lives; and

WHEREAS, during the month of August, the Drowning Prevention Coalition of Arizona and the Town of Marana's own #SplashSavvy, in collaboration with state and local governments, community organizations, and private citizens, will be engaging communities throughout Arizona in a coordinated and comprehensive response.

NOW, THEREFORE, the Mayor and the Marana Town Council do hereby declare August 2022 as "**Drowning Impact Awareness Month**," and urge all communities and citizens of Arizona to participate in efforts to reduce drowning risks, strengthen families, and help everyone stay safe in and around the water.

Given under my hand in these free United States in the State of Arizona, on the 3rd day of August 2022, and to which I have caused the Seal of the Town of Marana, to be affixed and have made this proclamation public.

ATTEST:

Cherry L. Lawson, Town Clerk

Ed Honea, Mayor

Council-Regular Meeting **P1**

Meeting Date: 08/03/2022

To: Mayor and Council

Submitted For: Andrea Caicedo, Assistant to the Town Manager

From: Andrea Caicedo, Assistant to the Town Manager

Date: August 3, 2022

Strategic Plan Focus Area:
Not Applicable

Subject: Relating to Intergovernmental Relations; presentation on the results and activities of the 55th Arizona State Legislative Second Regular Session; including a look forward to the upcoming Arizona State Legislative Session (Andrea Caicedo)

Discussion:

Each year, as a recap of the most recent Arizona State Legislative Session, and in anticipation of the upcoming Arizona State Legislative Session, the Town's Lobbyist, Triadvocates, gives a presentation to Council to more completely describe the events of the most recent legislative session. During the presentation, Triadvocates will discuss bills that were introduced, bills that were passed, and bills that were tracked by the Town of Marana during the 55th Arizona State Legislative Second Session. Triadvocates will also provide a look forward to the next legislative session.

Staff Recommendation:

Presentation only.

Suggested Motion:

Presentation only.

Attachments

No file(s) attached.

Council-Regular Meeting **C1**

Meeting Date: 08/03/2022

To: Mayor and Council

From: Brian Varney, Senior Planner

Date: August 3, 2022

Strategic Plan Focus Area:
Not Applicable

Subject: Resolution No. 2022-075: Relating to Development; approving a Final Plat for Saguaro Reserve II at Dove Mountain, Lots 1-292, Blocks "1" - "4" (Future Residential), Block "5" (Golf Course) and Common Areas "A" (Private Streets) and "B" (Open Space / Drainage) located north of Dove Mountain Boulevard and east of Dove Reserve Drive within Sections 16 and 21, Township 11 South and Range 12 East (Brian D. Varney)

Discussion:

Request
Baker and Associates Engineering, Inc. on behalf of the property owners, Pusch Ridge Christian Academy, Inc., Cottonwood Properties, Inc., and DM Phase IV Investment, LLC, is requesting approval of a final plat consisting of 292 residential lots, Blocks "1" - "4" (Future Residential), Block "5" (Golf Course) and Common Areas "A" (Private Streets) and "B" (Open Space/ Drainage) on approximately 135.9 acres within Dove Mountain.

Location
The proposed subdivision is located north of Dove Mountain Blvd. and east of Dove Reserve Drive.

Zoning
The zoning of the property is "F" Dove Mountain Specific Plan with a land use designation of Low-Density Residential (LDR). The LDR allowed minimum lot area is 6,000 square feet and, under the cluster option, an average site area of 4,000 square feet

per dwelling unit is permitted.

Land Use
The final plat proposes 292 residential lots, four future residential blocks, one golf course block, private streets and open space and drainage. A minimum lot size of 5,713 square feet and a maximum of 13,015 square feet are proposed. The plat proposes an average lot size of 7,635 square feet. The plat yields a density of 2.15 residences per acre.

Access and Traffic Circulation
The subdivision will be directly accessed from Dove Reserve Drive. The subdivision proposes 2.0 miles of new private streets.

Infrastructure and Utilities
Water service will be provided to the subdivision by Tucson Water. Wastewater service will be provided by Pima County Regional Wastewater.

Staff Recommendation:
Staff has reviewed the request against the requirements of the Dove Mountain Specific Plan, the Marana Town Code, and the Marana General Plan. This Final Plat is in substantial conformance with all required development regulations, and staff recommends approval.

Suggested Motion:
I move to adopt Resolution No. 2022-075, approving a Final Plat for Saguaro Reserve II at Dove Mountain, Lots 1-292, Blocks "1" - "4" (Future Residential), Block "5" (Golf Course) and Common Areas "A" (Private Streets) and "B" (Open Space / Drainage).

Attachments

Resolution No. 2022-075
Saguaro Reserve II FP
PRV2204-003 Saguaro Reserve II at DM_Map
PRV2204-003 Saguaro Reserve II at DM_App

MARANA RESOLUTION NO. 2022-075

RELATING TO DEVELOPMENT; APPROVING A FINAL PLAT FOR SAGUARO RESERVE II AT DOVE MOUNTAIN, LOTS 1-292, BLOCKS "1" - "4" (FUTURE RESIDENTIAL), BLOCK "5" (GOLF COURSE) AND COMMON AREAS "A" (PRIVATE STREETS) AND "B" (OPEN SPACE / DRAINAGE) LOCATED NORTH OF DOVE MOUNTAIN BOULEVARD AND EAST OF DOVE RESERVE DRIVE WITHIN SECTIONS 16 AND 21, TOWNSHIP 11 SOUTH AND RANGE 12 EAST

WHEREAS On May 31, 1989, Town Council adopted Ordinance No. 89.22, approving the Dove Mountain Specific Plan (then known as the Tortolita Mountain Properties Specific Plan) which has been amended from time to time by ordinance; and

WHEREAS, the preliminary plat for Saguaro Reserve II at Dove Mountain, Lots 1-292, Blocks 1 – 4, Block 5, and Common Areas "A" and "B" was approved on December 17, 2021; and,

WHEREAS Baker and Associates Engineering, Inc. representing the property owners, Pusch Ridge Christian Academy, Inc., Cottonwood Properties, Inc., and DM Phase IV Investment, L.L.C., has applied for approval of the final plat for Saguaro Reserve II at Dove Mountain, Lots 1-292, Blocks "1"–"4" (Future Residential), Block "5" (Golf Course) and Common Areas "A" (Private Streets) and "B" (Open Space / Drainage) located north of Dove Mountain Boulevard and east of Dove Reserve Drive; and

WHEREAS the Mayor and Town Council, at its August 3, 2022 meeting, determined that the final plat for Saguaro Reserve II at Dove Mountain should be approved.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE TOWN OF MARANA, ARIZONA that the final plat for Saguaro Reserve II at Dove Mountain is hereby approved.

PASSED AND ADOPTED by the Mayor and Council of the Town of Marana, Arizona, this 3rd day of August, 2022.

Mayor Ed Honea

ATTEST:

Cherry L. Lawson, Town Clerk

APPROVED AS TO FORM:

Jane Fairall, Town Attorney

DEDICATION

WE, THE UNDERSIGNED, HEREBY WARRANT THAT WE ARE ALL AND THE ONLY PARTIES HAVING ANY FEE TITLE INTEREST IN THE LAND SHOWN ON THIS PLAT, AND WE CONSENT TO THE SUBDIVISION OF THIS LAND IN THE MANNER SHOWN ON THIS PLAT.

UTILITY EASEMENTS, AS SHOWN ON THIS PLAT, ARE GRANTED TO THE TOWN OF MARANA, PIMA COUNTY, AND ALL PUBLIC AND PRIVATE UTILITY COMPANIES FOR THE PURPOSE OF INSTALLATION AND MAINTENANCE OF, AND ACCESS TO, PUBLIC AND PRIVATE UTILITIES AND PUBLIC SEWERS.

NO VEHICULAR ACCESS EASEMENTS SHOWN ON THIS PLAT ARE GRANTED TO THE TOWN OF MARANA FOR THE PURPOSE OF ACCESS CONTROL TO ADJACENT COMMON AREAS.

WE AND OUR SUCCESSORS AND ASSIGNS HEREBY HOLD THE TOWN OF MARANA, ITS EMPLOYEES, OFFICERS, AND AGENTS, HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS FOR DAMAGES RELATED TO THE USE OF THESE LANDS NOW AND IN THE FUTURE BY REASON OF FLOODING, FLOWAGE, EROSION, OR DAMAGE CAUSED WATER, WHETHER SURFACE, FLOOD OR RAINFALL. NATURAL DRAINAGE SHALL NOT BE ALTERED, DISTURBED, OR OBSTRUCTED WITHOUT THE APPROVAL OF THE TOWN OF MARANA.

ALL COMMON AREAS, AS SHOWN ON THIS PLAT, ARE RESERVED FOR THE PRIVATE USE AND AND CONVENIENCE OF ALL OWNERS OF PROPERTY WITHIN THIS SUBDIVISION, THEIR GUESTS AND INVITEES. SUCH PRIVATE USE SHALL INCLUDE CONSTRUCTION OF COMMON AREA IMPROVEMENTS REQUIRED BY THE TOWN FOR THE SUBDIVISION. ALL COMMON AREAS ARE GRANTED AS EASEMENTS TO THE TOWN OF MARANA, PIMA COUNTY, AND ALL PUBLIC AND PRIVATE UTILITY COMPANIES FOR THE PURPOSE OF ACCESS TO, INSTALLATION AND MAINTENANCE OF PUBLIC AND PRIVATE UTILITIES AND PUBLIC SEWERS.

TITLE TO ALL COMMON AREAS SHALL BE VESTED IN AN ASSOCIATION OF INDIVIDUAL LOT OWNERS AS ESTABLISHED BY THE AMENDED AND RESTATED MASTER DECLARATION OF COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS RECORDED IN DOCKET 10660/1083 AND AS ESTABLISHED BY THE SUPPLEMENTARY DECLARATION OF COVENANTS, CONDITIONS, RESTRICTIONS AND EASEMENTS AS RECORDED IN SEQUENCE NO. _____ IN THE OFFICE OF THE PIMA COUNTY RECORDER. EACH AND EVERY LOT OWNER WITHIN THE SUBDIVISION SHALL BE A MEMBER OF THE ASSOCIATION, WHICH WILL ACCEPT ALL RESPONSIBILITY FOR THE CONTROL, MAINTENANCE, SAFETY AND LIABILITY OF ALL COMMON AREAS WITHIN THIS SUBDIVISION.

LANDMARK TITLE ASSURANCE AGENCY OF ARIZONA, L.L.C.

AN ARIZONA LIMITED LIABILITY COMPANY AS TRUSTEE UNDER TRUSTS #2107, #2108 AND #18379-T AND NOT IN ITS CORPORATE CAPACITY

_____

TRUST OFFICER

TRUST BENEFICIARIES

TRUST #2107 COTTONWOOD PROPERTIES, INC.
3567 E. SUNRISE DRIVE, #219
TUCSON, AZ 85718

TRUST #2108 PUSCH RIDGE CHRISTIAN ACADEMY
C/O COTTONWOOD PROPERTIES, INC.
3567 E. SUNRISE DRIVE, #219
TUCSON, AZ 85718

TRUST #18379-T DM PHASE IV INVESTMENT, L.L.C.
C/O COTTONWOOD PROPERTIES, INC.
3567 E. SUNRISE DRIVE, #219
TUCSON, AZ 85718

ACKNOWLEDGMENT

STATE OF ARIZONA
COUNTY OF PIMA } S.S.

ON THIS, THE 7th DAY OF July, 2022 BEFORE ME PERSONALLY APPEARED Brenda Carrillo WHO ACKNOWLEDGED HIMSELF/HERSELF TO BE THE TRUST OFFICER OF LANDMARK TITLE ASSURANCE AGENCY OF ARIZONA, L.L.C., AN ARIZONA LIMITED LIABILITY COMPANY, AS TRUSTEE UNDER TRUST NUMBERS 2107, 2108 AND 18379-T, AND NOT IN ITS CORPORATE CAPACITY AND ACKNOWLEDGED THAT HE/SHE, AS THE TRUST OFFICER, BEING AUTHORIZED TO DO SO, EXECUTED THE FOREGOING INSTRUMENT FOR THE PURPOSE(S) THEREIN CONTAINED.

IN WITNESS WHEREOF: I HEREBY SET MY NAME AND OFFICIAL SEAL.

_____

NOTARY PUBLIC

NOTARY PUBLIC
STATE OF ARIZONA
Pima County
DIANE L SLOANE
COMMISSION # 548569
My Commission Expires July 26, 2022

GENERAL NOTES

1. THE GROSS AREA OF THIS SUBDIVISION IS 5,923,868 SF (135.9 ACRES).
2. THE TOTAL NUMBER OF LOTS IS 292. THE TOTAL NUMBER OF BLOCKS IS 5.
3. THE TOTAL AREA OF COMMON AREA "A" (PRIVATE STREETS) IS 462,014 SF.
   THE TOTAL AREA OF COMMON AREA "B" (OPEN SPACE/DRAINAGE) IS 3,155,246 SF.
4. TOTAL MILES OF NEW PUBLIC STREETS IS 0.0 MILES.
   TOTAL MILES OF NEW PRIVATE STREETS IS 2.0 MILES.
5. AVERAGE ALLOWABLE LOT SIZE IS 4,000 SF (PER THE DOVE MOUNTAIN SPECIFIC PLAN "LDR" DESIGNATION; CLUSTER OPTION).
   MINIMUM PROVIDED LOT SIZE IS 5713 SF (LOTS #62 – NOT A RESTRICTION).
   AVERAGE LOT SIZE IS 7,635 SF.
   MAXIMUM LOT SIZE PROVIDED IS 13,015 SF (LOT #274 – NOT A RESTRICTION).
   MAXIMUM ALLOWABLE BUILDING HEIGHT IS 35' FOR "LDR."
6. THERE WILL BE 2 PARKING SPACES PROVIDED FOR EACH LOT ON-SITE, AS WELL AS 2 ADDITIONAL GUEST PARKING SPACES.
7. THE BUILDING SETBACKS ARE AS FOLLOWS:
   FRONT: 20 FEET REAR: 15 FEET
   SIDE: 5 FEET CORNER: 20 FEET
8. THE APPROVED ZONING FOR THIS PROJECT IS "F" DOVE MOUNTAIN SPECIFIC PLAN AND THE LAND USE DESIGNATION IS "LDR" IN ACCORDANCE WITH THE DOVE MOUNTAIN SPECIFIC PLAN AND WILL REMAIN.
9. THE GROSS DENSITY FOR THIS PROJECT IS 2.1 RAC.
10. THIS PROJECT SHALL COMPLY WITH THE CONDITIONS SET FORTH IN THE DOVE MOUNTAIN SPECIFIC PLAN APPROVED IN MAY, 1989 (ORDINANCE NO. 89.22), AND AS AMENDED BY MARANA ORDINANCE FROM TIME TO TIME.
11. NO FURTHER SUBDIVIDING OR LOT SPLITTING SHALL BE DONE WITHOUT WRITTEN APPROVAL OF THE TOWN OF MARANA MAYOR AND COUNCIL.
12. APPROVAL OF THIS PLAT DOES NOT AFFIRM, CERTIFY OR APPROVE ANY LAND DIVISION THAT MAY BE CONTRARY TO STATE LAW, NOR DOES IT CERTIFY THE EXISTENCE OF, OR COMPLIANCE WITH, ANY DEED RESTRICTIONS OR EASEMENTS.
13. OBJECTS AND MATERIALS WITHIN THE SIGHT-VISIBILITY TRIANGLES SHALL BE PLACED SO AS NOT TO INTERFERE WITH A VISIBILITY PLANE DESCRIBED BY TWO HORIZONTAL LINES LOCATED 30 INCHES AND 72 INCHES ABOVE THE FINISHED GRADE OF THE ROADWAY SURFACE AND SHALL CONFORM TO SECTION 4.8 OF THE TOWN OF MARANA SUBDIVISION STANDARDS.
14. THE PROFESSIONAL ENGINEER OF RECORD SHALL CERTIFY AS TO THE FORM, LINE AND FUNCTION OF ALL PUBLIC AND PRIVATE ROADWAYS AND DRAINAGE STRUCTURES BEFORE THE RELEASE OF ASSURANCES.
15. THE AREA BETWEEN 100-YEAR FLOOD LIMITS REPRESENTS AN AREA THAT MAY BE SUBJECT TO FLOODING FROM A 100-YEAR FREQUENCY FLOOD AND ALL LAND IN THIS AREA WILL BE RESTRICTED TO USES THAT ARE COMPATIBLE WITH THE FLOODPLAIN MANAGEMENT AS APPROVED BY THE FLOODPLAIN ADMINISTRATOR.
17. ALL NEW AND EXISTING UTILITIES EXCEPT ELECTRICAL TRANSMISSION LINES CARRYING 48 KV OR GREATER, AND THOSE LINES WHICH CAN BE SHOWN TO EXIST IN CURRENT OR FUTURE ELECTRICAL TRANSMISSION CORRIDORS, WITHIN OR CONTIGUOUS TO THE SITE, SHALL BE PLACED UNDERGROUND.
18. THIS SUBDIVISION IS LOCATED WITHIN THE CITY OF TUCSON SERVICE AREA, WHICH HAS BEEN DESIGNATED AS HAVING AN ASSURED WATER SUPPLY UNDER A.R.S. SECTION 45-576.
19. INSTALLATION OF ITEMS SUCH AS LANDSCAPING, IRRIGATION, SIGNAGE, MONUMENTS, AND DRAINAGE IMPROVEMENTS IN THE PUBLIC RIGHTS-OF-WAY SHALL REQUIRE A PERPETUAL LICENSE AGREEMENT FOR INSTALLATION, MAINTENANCE AND INDEMNIFICATION. THIS DOCUMENT SHALL BE EXECUTED PRIOR TO FINAL APPROVAL OF LANDSCAPE PLANS OR IMPROVEMENT PLANS ALLOWING INSTALLATIONS WITHIN THE PUBLIC RIGHT-OF-WAY.

BASIS OF BEARING

BASIS OF BEARING: NORTH 00°00'49" EAST, ACCORDING TO SEQUENCE NUMBER 20081880587, PIMA COUNTY, ARIZONA BETWEEN MONUMENTS FOUND ON THE WEST LINE OF THE SOUTHWEST QUARTER OF SECTION 16, AS SHOWN (SEE BASIS OF BEARING INFO, ETC., ON SHEET #2).

RECORDING DATA

STATE OF ARIZONA
COUNTY OF PIMA } S.S.

FEE _____
SEQUENCE NO. _____

THIS INSTRUMENT WAS FILED FOR RECORD AT THE REQUEST OF BAKER AND ASSOCIATES ENGINEERING, INC., ON THIS _____ DAY OF _____, 20____, AT _____M. IN SEQUENCE NO. _____ THEREOF.

_____ DATE

GABRIELLA CAZARES-KELLY, PIMA COUNTY RECORDER
DEPUTY COUNTY RECORDER

ASSURANCES

ASSURANCE IN THE FORM OF THIRD PARTY TRUST AGREEMENTS FROM LANDMARK TITLE ASSURANCE AGENCY OF ARIZONA, L.L.C., TRUST NUMBERS 2107, 2108 AND 18379-T, AS RECORDED IN SEQUENCE NO. _____ IN THE OFFICE OF THE RECORDER OF PIMA COUNTY, ARIZONA HAVE BEEN PROVIDED TO GUARANTEE INSTALLATION OF REQUIRED STREET, SEWER, ELECTRIC, GAS, AND WATER UTILITIES, DRAINAGE, FLOOD CONTROL AND OTHER SUBDIVISION IMPROVEMENTS MEETING ESTABLISHED MINIMUM STANDARDS OF DESIGN AND CONSTRUCTION.

BY: _____ _____
TOWN OF MARANA DATE

CERTIFICATIONS

I HEREBY CERTIFY THAT THE BOUNDARY SURVEY AS SHOWN ON THIS PLAT WAS PERFORMED UNDER MY DIRECTION AND THAT ALL EXISTING OR PROPOSED SURVEY MONUMENTS AND MARKERS SHOWN ARE CORRECTLY DESCRIBED.

BRIAN J. LIVERNOIS, R.L.S.
ON POINT SURVEYING, PLLC
REGISTERED LAND SURVEYOR NO. 58324
STATE OF ARIZONA

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
58324
BRIAN J
LIVERNOIS
Date Signed 7/6/22
ARIZONA U.S.A.

I HEREBY CERTIFY THAT THE INTERIOR SUBDIVISION GEOMETRY FOR THIS PLAT WAS REVIEWED AND SHOWN UNDER MY SUPERVISION.

WILLIAM H. BAKER, JR.
BAKER & ASSOCIATES ENGINEERING, INC.
REGISTERED LAND SURVEYOR NO. 16784
STATE OF ARIZONA

REGISTERED LAND SURVEYOR
CERTIFICATE NO.
16784
WILLIAM H.
BAKER, JR
Date Signed 7/1/22
ARIZONA U.S.A.

I HEREBY CERTIFY THAT THE FLOODPRONE LIMITS AND EROSION HAZARD SETBACKS WERE REVIEWED AND SHOWN UNDER MY SUPERVISION.

LARRY K. ROBERTS
ARROYO ENGINEERING, L.L.C.
REGISTERED ENGINEER NO. 25331
STATE OF ARIZONA

Registered Professional Engineer (Civil)
CERTIFICATE NO.
25331
LARRY K.
ROBERTS
Date Signed 7-5-22
ARIZONA U.S.A.

TOWN OF MARANA APPROVALS

BY: _____ P.E. _____
MARANA TOWN ENGINEER/DEVELOPMENT ENGINEER DATE

BY: _____ _____
MARANA PLANNING MANAGER DATE

PIMA COUNTY WASTEWATER APPROVAL

BY: Hussein Alzubaidi 7-5-2022
PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT DATE

CITY OF TUCSON ASSURED WATER SUPPLY

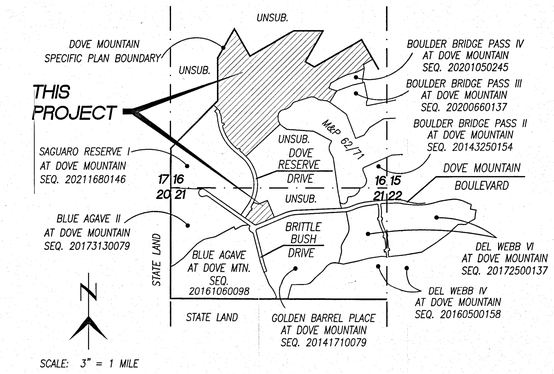
THE UNDERSIGNED CERTIFIES THAT IT IS DESIGNATED AS HAVING AN ASSURED WATER SUPPLY AND WILL PROVIDE WATER SERVICE TO THIS SUBDIVISION.

BY: Michael Mannelle 7-5-2022
ITS: Interim Administrator
CITY OF TUCSON WATER DEPARTMENT DATE

MARANA TOWN COUNCIL CERTIFICATION

I, _____, CLERK OF THE TOWN OF MARANA, HEREBY CERTIFY THAT THIS PLAT WAS APPROVED BY THE TOWN COUNCIL OF THE TOWN OF MARANA ON THE _____ DAY OF _____, 20____.

BY: _____ _____
CLERK OF THE TOWN OF MARANA DATE



LOCATION PLAN

SECTIONS 16 AND 21, T11S, R12E,
G&SRB&M, TOWN OF MARANA, PIMA COUNTY, ARIZONA

LEGEND

▲	SURVEY MONUMENT TO BE SET PER TOM STD. DTL. M-103B
△	2" BRASS SURVEY MONUMENT TO BE SET PER TOM STD. DTL. M-103B
•	SET SURVEY MONUMENT TAGGED "RLS 58324" UNLESS OTHERWISE NOTED
OR —o	1/2" REBAR TO BE SET BY A REGISTERED LAND SURVEYOR
———	SUBDIVISION BOUNDARY
C5	CURVE DATA (SEE TABLE, SHEET 18)
L10	LINE DATA (SEE TABLE, SHEET 2)
———	NEW RIGHT-OF-WAY LINE
— — — —	EXISTING RIGHT-OF-WAY LINE
—— – ——	STREET CENTERLINE
— — — —	EASEMENT LINE AS SHOWN (SEE ALSO "EASEMENT KEYNOTES," SHEETS #3 – #17)
——·——·——	DEVELOPED 100 YEAR FLOODPRONE LINE ("F.P.L.")
——— - - ———	DEVELOPED EROSION SETBACK LINE ("E.S.L.")
— · — · —	FEMA FLOODPRONE LINE
(R)	RADIAL
. P/L	BOUNDARY/PROPERTY LINE
SVT	SIGHT VISIBILITY TRIANGLE EASEMENT AREA (SEE ALSO "EASEMENT KEYNOTES", SHEETS #3-#17)

ADMINISTRATIVE ADDRESS

15000 N. DOVE MOUNTAIN BOULEVARD, MARANA, AZ 85658

FINAL PLAT for

SAGUARO RESERVE II AT DOVE MOUNTAIN, LOTS 1-292, BLOCKS "1"-"4" (FUTURE RESIDENTIAL), BLOCK "5" (GOLF COURSE) AND COMMON AREAS "A" (PRIVATE STREETS) AND "B" (OPEN SPACE/DRAINAGE)

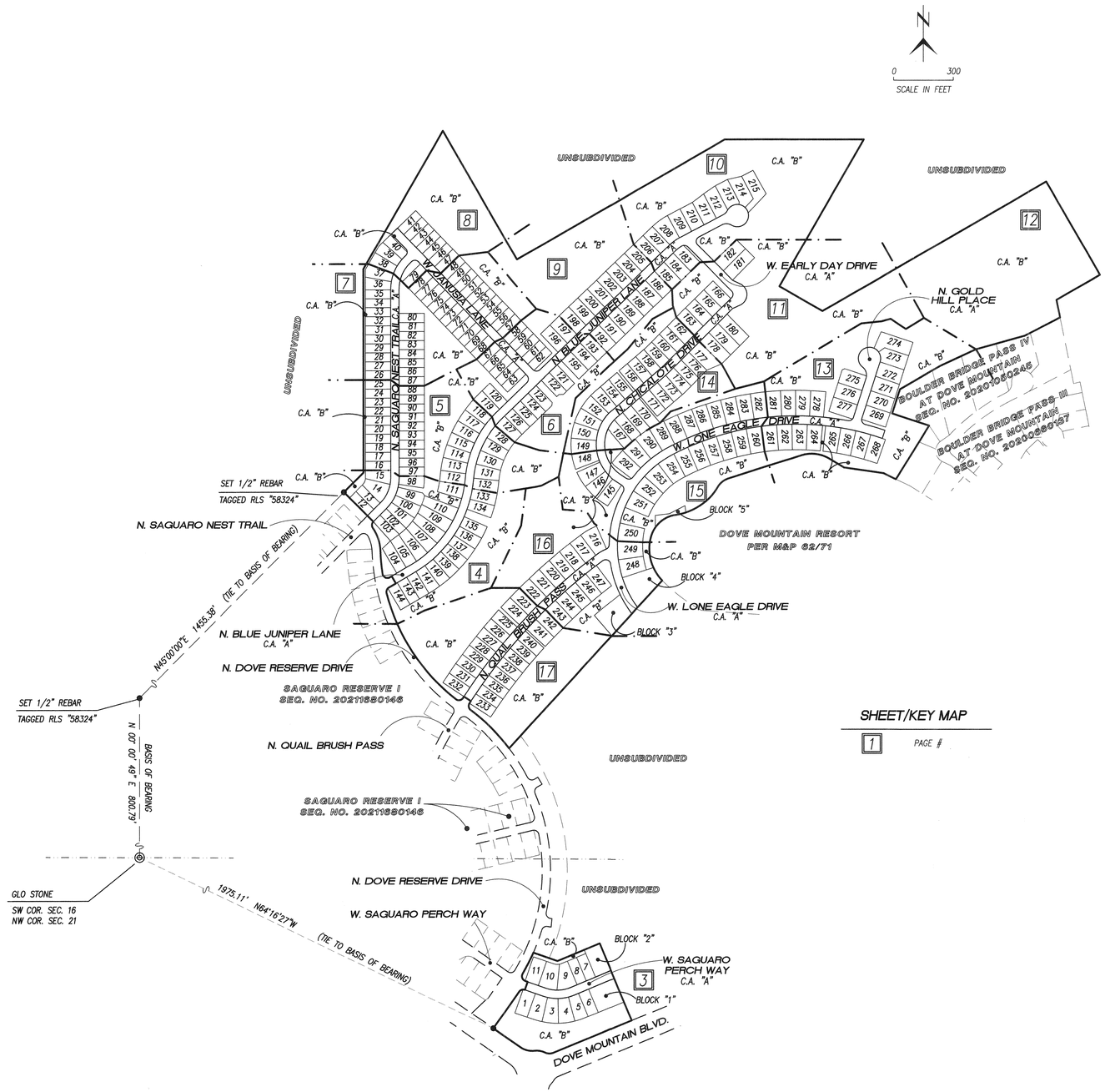
BEING A RESUBDIVISION OF A PORTION OF BLOCK "1" OF SAGUARO RESERVE I, SEQUENCE NO. 20211680146, AND A PORTION OF BLOCK "G" OF DOVE MOUNTAIN RESORT, MAPS & PLATS 62/71, AND A PORTION OF SECTIONS 16 AND 21, T11S, R12E, G&SRM, TOWN OF MARANA, PIMA COUNTY, ARIZONA

Baker & Associates Engineering, Inc.
3561 E. Sunrise Drive, Suite #225 Tucson, Arizona 85718 (520) 318-1950 Fax (520) 318-1930

#PRV2204-003 REF.: #PRV2109-005; PRV1803-002 JOB #2447.2 DATE: 6/30/2022 SHEET 1 OF 18

SEQUENCE #_____

SEQUENCE #



SHEET/KEY MAP AND BASIS OF BEARING MAP/TIES

SHEET/KEY MAP

1 PAGE #

NUMBER	DIRECTION	DISTANCE
L1	S59°33'42"W	41.43'
L2	S59°33'42"W	10.00'
L3	S62°18'25"W	23.37'
L4	S27°41'35"E	15.84'
L5	S22°37'44"E	21.00'
L6	N22°37'44"W	21.00'
L7	S59°33'42"W	7.53'
L8	S38°05'09"E	16.55'
L9	S08°06'21"W	13.04'
L10	S45°00'00"E	40.00'
L11	S00°00'00"W	7.53'
L12	N45°00'00"E	1.63'
L13	N45°00'00"E	1.63'
L14	S00°00'00"W	7.53'
L15	N46°10'28"E	10.68'
L16	N46°10'28"E	10.68'
L17	S43°49'32"E	14.00'
L18	S46°10'28"W	21.00'
L19	S46°10'28"W	21.00'
L20	S43°49'32"E	8.33'
L21	S46°10'28"W	14.07'
L22	S46°10'28"W	14.07'
L23	S06°22'08"W	15.62'
L24	N46°10'28"E	15.00'
L25	S87°35'53"W	22.67'
L26	N46°10'28"E	23.00'
L27	S49°37'36"W	10.00'
L28	S49°37'36"W	12.73'
L29	N86°30'42"W	40.50'
L30	S70°28'03"E	71.09'
L31	N53°06'28"W	115.07'
L32	S44°11'49"E	28.46'
L33	S49°45'03"W	95.37'
L34	N46°10'28"E	79.00'
L35	N49°37'36"E	5.38'
L36	S33°24'58"E	15.00'
L37	S00°00'00"W	3.19'
L38	N56°22'05"W	34.66'
L39	S08°57'02"E	10.27'
L40	N42°33'05"E	21.36'
L41	S42°33'05"W	21.39'
L42	N18°34'49"E	21.00'
L43	N18°34'49"E	21.00'
L44	S63°06'18"W	14.14'
L45	S59°19'57"W	60.78'
L46	S46°10'28"W	11.13'
L47	N57°53'20"E	56.02'
L48	N62°18'25"E	41.82'
L49	N30°00'00"E	31.86'
L50	N22°39'15"E	25.47'
L51	N45°15'04"E	4.62'
L52	S16°37'48"E	179.62'
L53	S10°28'27"E	83.45'
L54	N40°14'57"W	95.37'
L55	N43°49'32"W	79.00'
L56	S48°20'22"E	71.71'
L57	N43°49'32"W	41.67'
L58	S41°39'38"W	71.71'
L59	S46°10'28"W	55.67'

NUMBER	DIRECTION	DISTANCE
L101	N60°25'08"E	43.23'
L102	N60°25'08"E	141.06'
L103	N71°53'42"W	74.55'
L104	N71°53'42"W	21.05'
L105	S44°44'56"E	39.90'
L106	S44°44'56"E	154.33'
L107	S44°44'56"E	38.01'
L108	N42°33'05"E	199.77'
L109	N42°33'05"E	310.17'
L110	S70°35'04"E	41.65'
L111	S56°22'05"E	10.99'
L112	N79°08'27"E	41.28'
L113	S63°31'58"E	32.42'
L114	N84°40'17"E	29.84'
L115	S67°22'16"W	10.00'
L116	S73°38'28"W	45.33'
L117	S22°14'46"E	43.73'
L118	N86°38'19"E	58.64'
L119	S71°38'21"E	13.25'
L120	S43°53'58"W	20.27'
L121	S60°06'34"W	37.22'
L122	S45°21'52"W	79.28'
L123	N27°01'30"E	63.72'
L124	N70°00'52"E	88.88'
L125	S31°07'18"W	217.97'
L126	S56°43'47"W	44.31'
L127	S30°37'48"W	94.98'
L128	S52°41'12"E	25.00'
L129	N37°18'48"E	126.40'
L130	S40°21'00"E	58.93'
L131	S55°20'17"W	66.41'
L132	S11°29'41"W	70.24'
L133	S34°25'45"W	114.11'
L134	S63°40'00"W	110.26'
L135	S01°27'00"W	27.48'
L136	S45°08'56"W	68.63'
L137	N70°13'58"E	44.04'
L138	N20°22'50"W	102.27'
L139	N03°06'48"W	63.17'
L140	N00°55'29"W	42.51'
L141	N10°23'35"W	103.13'
L142	N06°16'07"W	56.55'
L143	N26°35'02"W	58.26'
L144	S39°38'20"W	47.88'
L145	S58°31'00"W	62.16'
L146	S35°24'09"W	48.21'
L147	S03°52'54"W	33.68'
L148	S58°43'40"W	34.01'
L149	S03°08'51"W	51.91'
L150	S01°38'22"W	62.23'
L151	S12°21'46"W	20.05'
L152	S62°58'42"W	59.05'
L153	S15°48'53"W	60.32'
L154	S43°03'48"W	101.92'
L155	S02°57'57"E	88.45'
L156	N45°58'29"E	51.05'
L157	N66°25'25"E	169.41'
L158	S86°06'10"E	55.99'
L159	N42°39'17"E	37.07'
L160	N49°30'52"E	136.74'
L161	N74°09'11"E	47.20'
L162	N28°12'52"E	56.76'
L163	N70°04'37"E	317.12'
L164	N44°56'06"E	61.93'
L165	N74°37'25"E	46.73'
L166	N37°16'40"E	36.86'
L167	N10°22'29"E	34.43'
L168	S19°26'32"W	44.38'
L169	N30°48'56"E	53.85'
L170	N55°43'56"E	135.06'

NUMBER	DIRECTION	DISTANCE
L171	N39°25'56"E	76.24'
L172	N60°39'10"E	75.71'
L173	N32°13'49"E	92.82'
L174	S22°57'54"W	127.56'
L175	N77°27'04"E	63.22'
L176	S85°55'04"E	34.30'
L177	N64°17'58"E	64.76'
L178	N07°57'21"W	56.36'
L179	N44°52'21"E	75.86'
L180	N76°51'40"E	148.88'
L181	N43°23'13"E	135.22'
L182	N69°06'29"E	74.16'
L183	N78°55'39"W	177.75'
L184	S79°04'37"E	31.73'
L185	S80°18'10"E	129.26'
L186	N78°14'59"E	35.42'
L187	S49°20'15"W	50.76'
L188	S02°07'22"W	24.58'
L189	S32°19'51"W	63.00'
L190	S54°57'35"W	63.39'
L191	S28°30'31"W	84.84'
L192	S46°44'03"W	198.68'
L193	S32°44'50"W	175.90'
L194	S23°46'30"W	65.06'
L195	S72°20'57"W	44.01'
L196	S43°06'15"W	44.53'
L197	S22°37'44"E	41.80'
L198	S00°32'24"W	25.00'
L199	S12°16'18"W	38.07'
L200	S78°25'41"W	72.98'
L201	S04°16'28"W	65.02'
L202	S46°27'36"W	61.95'
L203	S10°27'53"W	126.42'
L204	S23°33'40"W	57.39'
L205	N65°36'38"W	131.27'
L206	S25°34'07"W	30.51'
L207	N57°33'09"E	104.30'
L208	S24°38'23"W	139.80'
L209	S68°40'54"W	83.22'
L210	S38°15'31"W	118.38'
L211	S46°43'47"W	275.98'
L212	N32°49'48"E	56.53'
L213	S64°46'22"W	91.63'
L214	S62°30'51"E	28.73'
L215	S38°23'09"W	36.90'
L216	N23°04'36"W	17.53'
L217	S35°46'59"W	185.55'
L218	N18°35'43"E	46.37'
L219	N47°05'26"E	25.19'
L220	N69°11'34"E	65.17'
L221	N02°16'32"E	11.70'
L222	N49°29'00"W	40.30'
L223	N42°35'32"E	170.14'
L224	N51°26'45"E	130.36'
L225	N44°49'57"E	134.77'
L226	N56°54'44"E	91.12'
L227	N36°04'30"E	201.75'
L228	N65°17'30"E	102.14'
L229	N45°01'13"E	71.62'
L230	N32°15'54"E	108.92'
L231	N73°33'56"E	54.97'
L232	N25°36'57"E	74.53'
L233	S77°09'18"W	40.96'
L234	N59°28'14"W	45.57'
L235	N04°59'26"E	70.21'
L236	N33°15'02"W	29.73'
L237	N08°50'09"E	44.69'
L238	N37°08'12"E	19.90'
L239	N28°05'22"W	39.83'
L240	N10°31'05"E	89.88'

NUMBER	DIRECTION	DISTANCE
L241	N71°15'50"E	102.80'
L242	N50°42'04"W	80.04'
L243	N89°12'17"W	42.48'
L244	S57°23'58"W	70.02'
L245	N77°45'58"E	54.05'
L246	S72°27'06"E	57.89'
L247	N76°38'56"E	114.90'
L248	S87°34'31"E	82.52'
L249	S82°28'53"E	37.35'
L250	N80°47'44"E	52.38'
L251	N71°38'55"E	42.48'
L252	N17°29'51"E	154.26'
L253	N35°27'48"W	43.45'
L254	N20°06'58"E	39.14'
L255	S07°26'04"W	73.44'
L256	S12°12'20"E	73.00'
L257	N52°17'00"E	100.79'
L258	N71°45'17"E	58.64'
L259	N41°39'14"E	55.28'
L260	N14°13'00"E	70.56'
L261	N59°02'36"E	74.27'
L262	N36°04'05"E	237.93'
L263	S11°32'44"W	63.55'
L264	N40°44'25"E	102.58'
L265	N26°12'03"E	185.89'
L266	N31°31'21"E	162.34'
L267	S14°15'17"W	157.96'
L268	S14°14'17"E	129.84'
L269	N04°47'35"W	61.63'
L270	S13°29'22"E	61.20'
L271	N25°14'09"W	50.42'
L272	S21°46'28"W	45.67'
L273	S78°54'14"W	78.39'
L274	S56°55'09"W	52.15'
L275	N59°22'12"W	25.00'
L276	S52°41'12"E	25.00'
L277	S63°24'58"W	25.00'
L278	N89°04'31"E	25.00'
L279	N19°46'02"W	25.00'
L280	S29°53'26"E	25.00'
L281	S58°04'06"E	24.84'
L282	S79°37'31"E	25.00'
L283	S49°02'26"W	81.85'
L284	N46°10'28"E	804.35'
L285	N43°49'32"W	121.67'
L286	S22°51'34"E	19.63'
L287	N69°09'57"W	136.97'
L288	S20°50'03"W	25.00'
L289	N69°09'57"W	137.53'
L290	N63°40'05"W	146.38'
L291	S64°46'22"W	55.65'
L292	N25°13'38"W	18.73'
L293	S25°13'38"E	25.00'
L294	N60°32'28"E	31.75'
L295	N32°18'41"W	26.15'
L296	N32°18'41"W	27.55'
L297	S05°36'28"W	18.98'
L298	S84°04'00"E	14.00'
L299	S06°15'32"W	21.39'
L300	N05°36'28"E	95.27'
L301	N84°23'32"W	24.29'
L302	N06°29'01"E	89.24'
L303	S26°44'12"W	68.33'

LINE TABLE

FOR INTERIOR GEOMETRY ONLY

REGISTERED LAND SURVEYOR 16784 WILLIAM H. BAKER, JR. Expires 7/1/22 ARIZONA U.S.A.

FINAL PLAT for
SAGUARO RESERVE II AT DOVE MOUNTAIN, LOTS 1-292, BLOCKS "1"-"4" (FUTURE RESIDENTIAL), BLOCK "5" (GOLF COURSE) AND COMMON AREAS "A" (PRIVATE STREETS) AND "B" (OPEN SPACE/DRAINAGE)

BEING A RESUBDIVISION OF A PORTION OF BLOCK "1" OF SAGUARO RESERVE I, SEQUENCE NO. 20211680146, AND A PORTION OF BLOCK "G" OF DOVE MOUNTAIN RESORT, MAPS & PLATS 62/71, AND A PORTION OF SECTIONS 16 AND 21, T11S, R12E, G&SRM, TOWN OF MARANA, PIMA COUNTY, ARIZONA

Baker & Associates Engineering, Inc.
3561 E. Sunrise Drive, Suite #225 Tucson, Arizona 85718 (520) 318-1950 Fax (520) 318-1930

#PRV2204-003 REF.: #PRV2109-005; PRV1803-002 JOB #2447.2 DATE: 6/30/2022 SHEET 2 OF 18

SEQUENCE #_____

SEQUENCE #

SEE SHEET #17 FOR REMAINDER OF PROJECT

N

0 40
SCALE IN FEET

EASEMENT KEYNOTES

- (A) NEW 10' UTILITY EASEMENT GRANTED TO THE PUBLIC AND PRIVATE ROADWAY MAINTENANCE & SIGNAGE EASEMENT GRANTED TO THE HOMEOWNER'S ASSOCIATION BY THIS PLAT
- (B#) NEW SIGHT VISIBILITY TRIANGLE ("SVT") EASEMENT AREA GRANTED TO THE TOWN OF MARANA BY THIS PLAT
- (C) NEW 1' NO VEHICULAR ACCESS EASEMENT GRANTED BY THIS PLAT

SAGUARO RESERVE I SEQ. #20211680146 ZONING, SPECIFIC PLAN

SAGUARO RESERVE I SEQ. #20211680146 ZONING, SPECIFIC PLAN BLOCK "1"

UNSUBDIVIDED 218-31-183C ZONING, SPECIFIC PLAN

LOT 187

LOT 173

C.A. "B"

W. SAGUARO PERCH WAY
EX. 42' PRIVATE R/W PER SEQ. #20211680146

N. DOVE RESERVE DRIVE
EX. VARYING WIDTH PRIVATE R/W PER SEQ. #20211680146

W. SAGUARO PERCH WAY
C.A. "A"
(NEW PRIVATE STREET)

BOUNDARY/ DEV. 100 YR. F.P.L. LIMIT

Q100 = 113 CFS

Q100 = 92 CFS

C.A. "B" (OPEN SPACE/ DRAINAGE) 7,698 SF

DEV. 100 YR. F.P.L. LIMIT

LOTLINE/ DEV. 100 YR. F.P.L. LIMIT

C.A. "B" (OPEN SPACE/ DRAINAGE)

LOT 11 8889 SF

LOT 10 10,434 SF

LOT 9 9,422 SF

LOT 8 6350 SF

LOT 7 6350 SF

BLOCK "2" (FUTURE RESIDENTIAL) 12,477 SF

E.S.L.

BLOCK "1" (FUTURE RESIDENTIAL) 17,768 SF

LOT 1 8250 SF

LOT 2 9050 SF

LOT 3 8686 SF

LOT 4 8686 SF

LOT 5 7934 SF

LOT 6 6985 SF

C.A. "B" (OPEN SPACE/DRAINAGE)

C.A. "B" (OPEN SPACE/DRAINAGE) 88,230 SF

DOVE MOUNTAIN BOULEVARD
Ex. 100' PUBLIC R/W PER SEQ #20161960098

DOVE MOUNTAIN BOULEVARD
EX. 120' PUBLIC R/W PER SEQ # 20141710079

SEE BASIS OF BEARING TIE - SHEET #2

SIGHT VISIBILITY TRIANGLE ("SVT") - B1

DETAIL – COMMON AREA "B" (NEAR LOT 11)

FOR INTERIOR GEOMETRY ONLY

REGISTERED LAND SURVEYOR 16784 WILLIAM H. BAKER, JR. ARIZONA U.S.A.

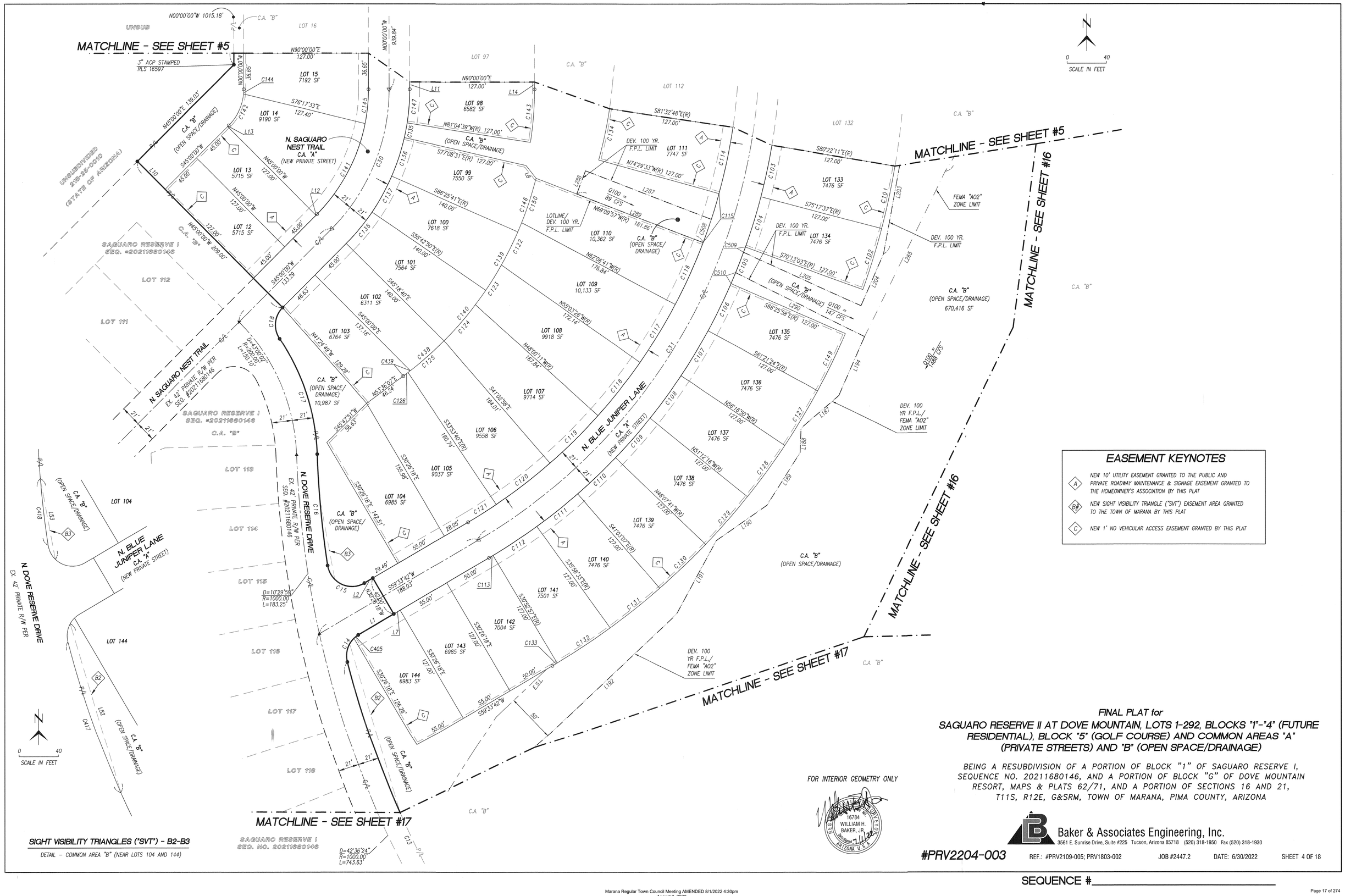
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#PRV2204-003 REF.: #PRV2109-005; PRV1803-002 JOB #2447.2 DATE: 6/30/2022 SHEET 3 OF 18

SEQUENCE #



EASEMENT KEYNOTES

- (A) NEW 10' UTILITY EASEMENT GRANTED TO THE PUBLIC AND PRIVATE ROADWAY MAINTENANCE & SIGNAGE EASEMENT GRANTED TO THE HOMEOWNER'S ASSOCIATION BY THIS PLAT
- (B#) NEW SIGHT VISIBILITY TRIANGLE ("SVT") EASEMENT AREA GRANTED TO THE TOWN OF MARANA BY THIS PLAT
- (C) NEW 1' NO VEHICULAR ACCESS EASEMENT GRANTED BY THIS PLAT

SIGHT VISIBILITY TRIANGLES ("SVT") - B2-B3

DETAIL - COMMON AREA "B" (NEAR LOTS 104 AND 144)

FOR INTERIOR GEOMETRY ONLY

16784 WILLIAM H. BAKER, JR. REGISTERED LAND SURVEYOR ARIZONA U.S.A.

FINAL PLAT for

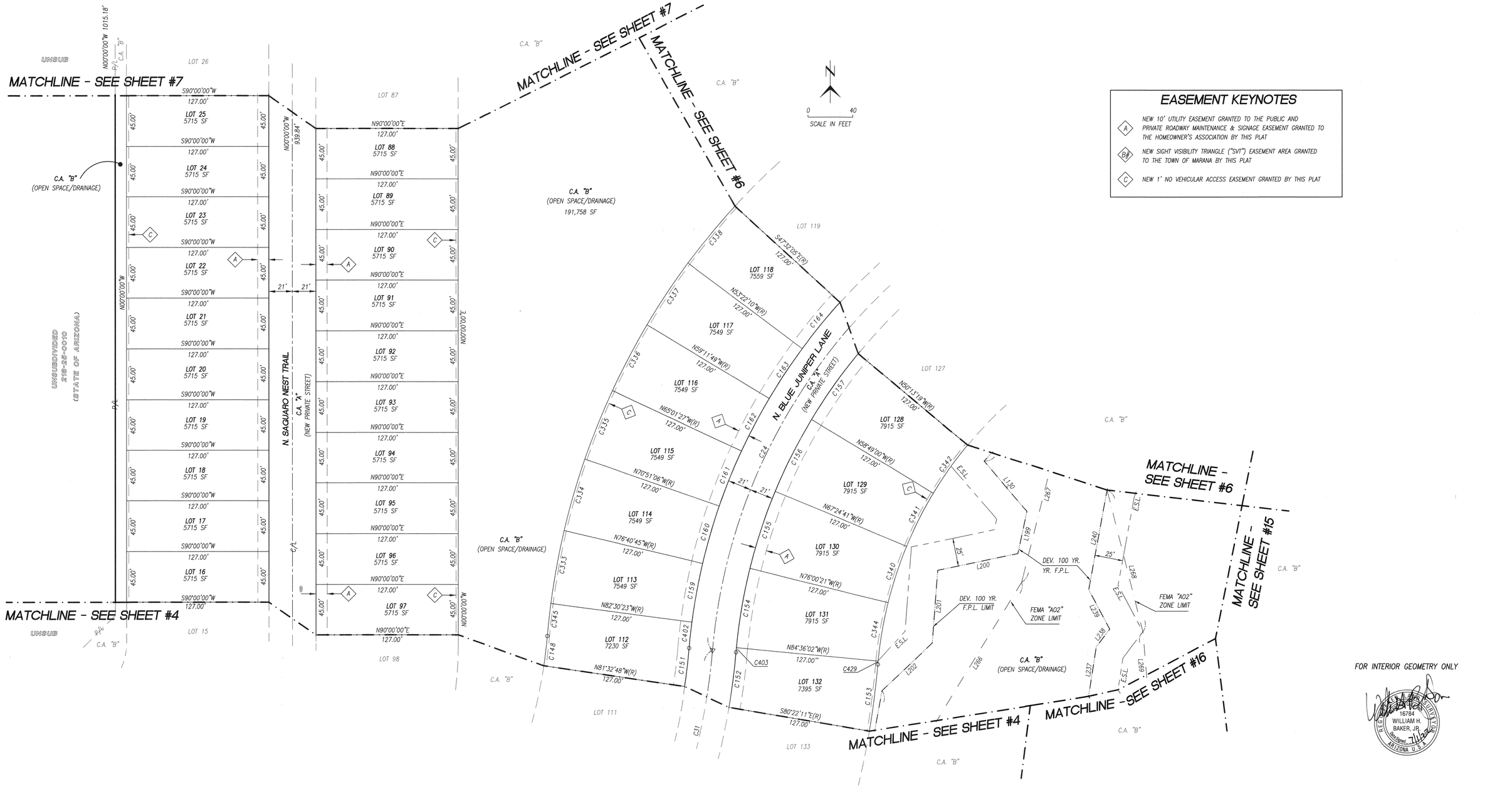
SAGUARO RESERVE II AT DOVE MOUNTAIN, LOTS 1-292, BLOCKS "1"-"4" (FUTURE RESIDENTIAL), BLOCK "5" (GOLF COURSE) AND COMMON AREAS "A" (PRIVATE STREETS) AND "B" (OPEN SPACE/DRAINAGE)

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#PRV2204-003 REF.: #PRV2109-005; PRV1803-002 JOB #2447.2 DATE: 6/30/2022 SHEET 4 OF 18

SEQUENCE #_____



EASEMENT KEYNOTES

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- (C) NEW 1' NO VEHICULAR ACCESS EASEMENT GRANTED BY THIS PLAT

SEQUENCE #_____

FOR INTERIOR GEOMETRY ONLY

16784 WILLIAM H. BAKER, JR. Registered Land Surveyor ARIZONA U.S.A.

FINAL PLAT for

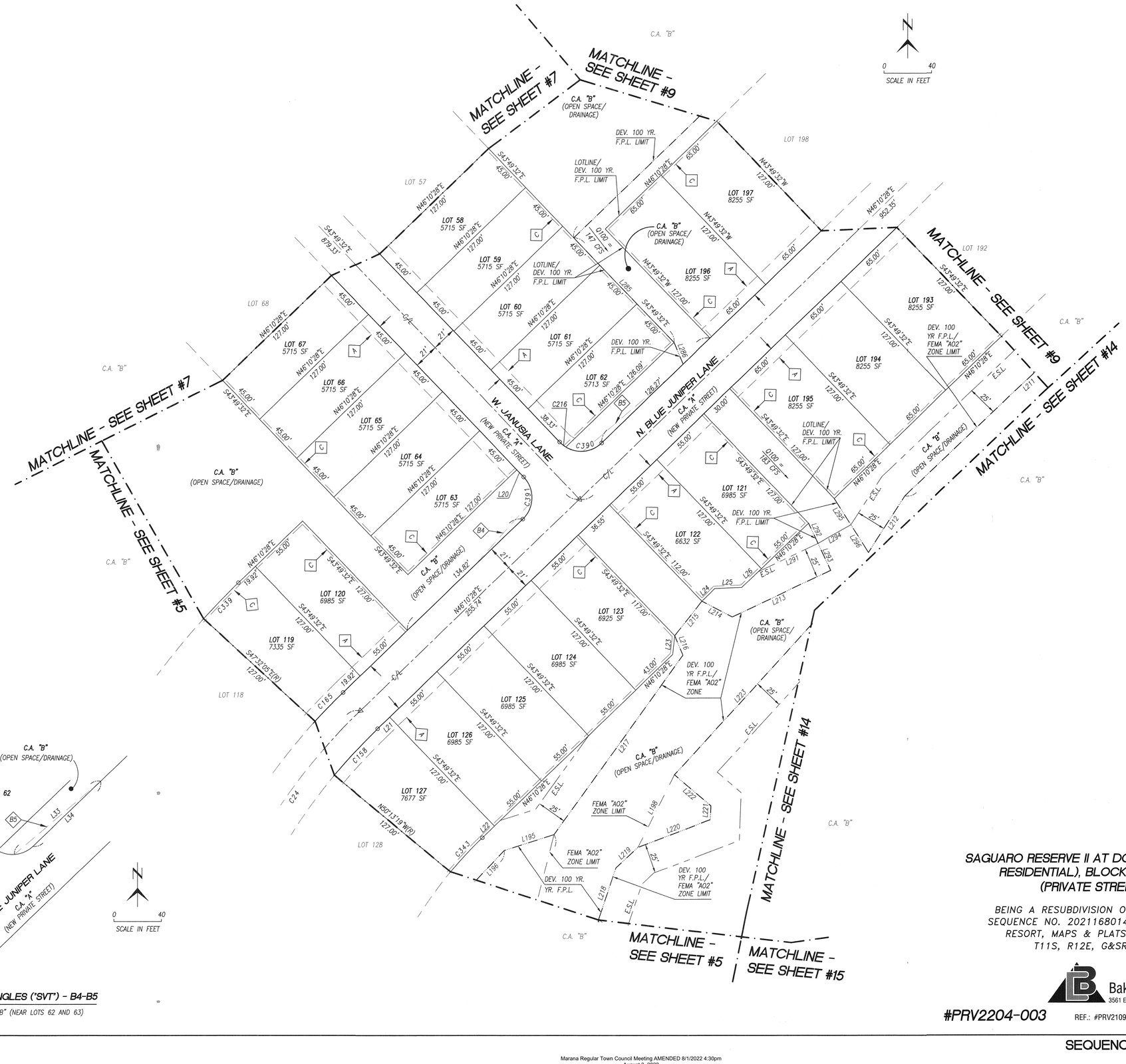
SAGUARO RESERVE II AT DOVE MOUNTAIN, LOTS 1-292, BLOCKS "1"-"4" (FUTURE RESIDENTIAL), BLOCK "5" (GOLF COURSE) AND COMMON AREAS "A" (PRIVATE STREETS) AND "B" (OPEN SPACE/DRAINAGE)

BEING A RESUBDIVISION OF A PORTION OF BLOCK "1" OF SAGUARO RESERVE I, SEQUENCE NO. 20211680146, AND A PORTION OF BLOCK "G" OF DOVE MOUNTAIN RESORT, MAPS & PLATS 62/71, AND A PORTION OF SECTIONS 16 AND 21, T11S, R12E, G&SRM, TOWN OF MARANA, PIMA COUNTY, ARIZONA

Baker & Associates Engineering, Inc.
3561 E. Sunrise Drive, Suite #225 Tucson, Arizona 85718 (520) 318-1950 Fax (520) 318-1930

#PRV2204-003 REF.: #PRV2109-005; PRV1803-002 JOB #2447.2 DATE: 6/30/2022 SHEET 5 OF 18

SEQUENCE #_____



EASEMENT KEYNOTES

- (A) NEW 10' UTILITY EASEMENT GRANTED TO THE PUBLIC AND PRIVATE ROADWAY MAINTENANCE & SIGNAGE EASEMENT GRANTED TO THE HOMEOWNER'S ASSOCIATION BY THIS PLAT
- (B#) NEW SIGHT VISIBILITY TRIANGLE ("SVT") EASEMENT AREA GRANTED TO THE TOWN OF MARANA BY THIS PLAT
- (C) NEW 1' NO VEHICULAR ACCESS EASEMENT GRANTED BY THIS PLAT

SIGHT VISIBILITY TRIANGLES ("SVT") - B4-B5

DETAIL - COMMON AREA "B" (NEAR LOTS 62 AND 63)

FOR INTERIOR GEOMETRY ONLY

REGISTERED LAND SURVEYOR 16784 WILLIAM H. BAKER, JR. ARIZONA U.S.A.

FINAL PLAT for

SAGUARO RESERVE II AT DOVE MOUNTAIN, LOTS 1-292, BLOCKS "1"-"4" (FUTURE RESIDENTIAL), BLOCK "5" (GOLF COURSE) AND COMMON AREAS "A" (PRIVATE STREETS) AND "B" (OPEN SPACE/DRAINAGE)

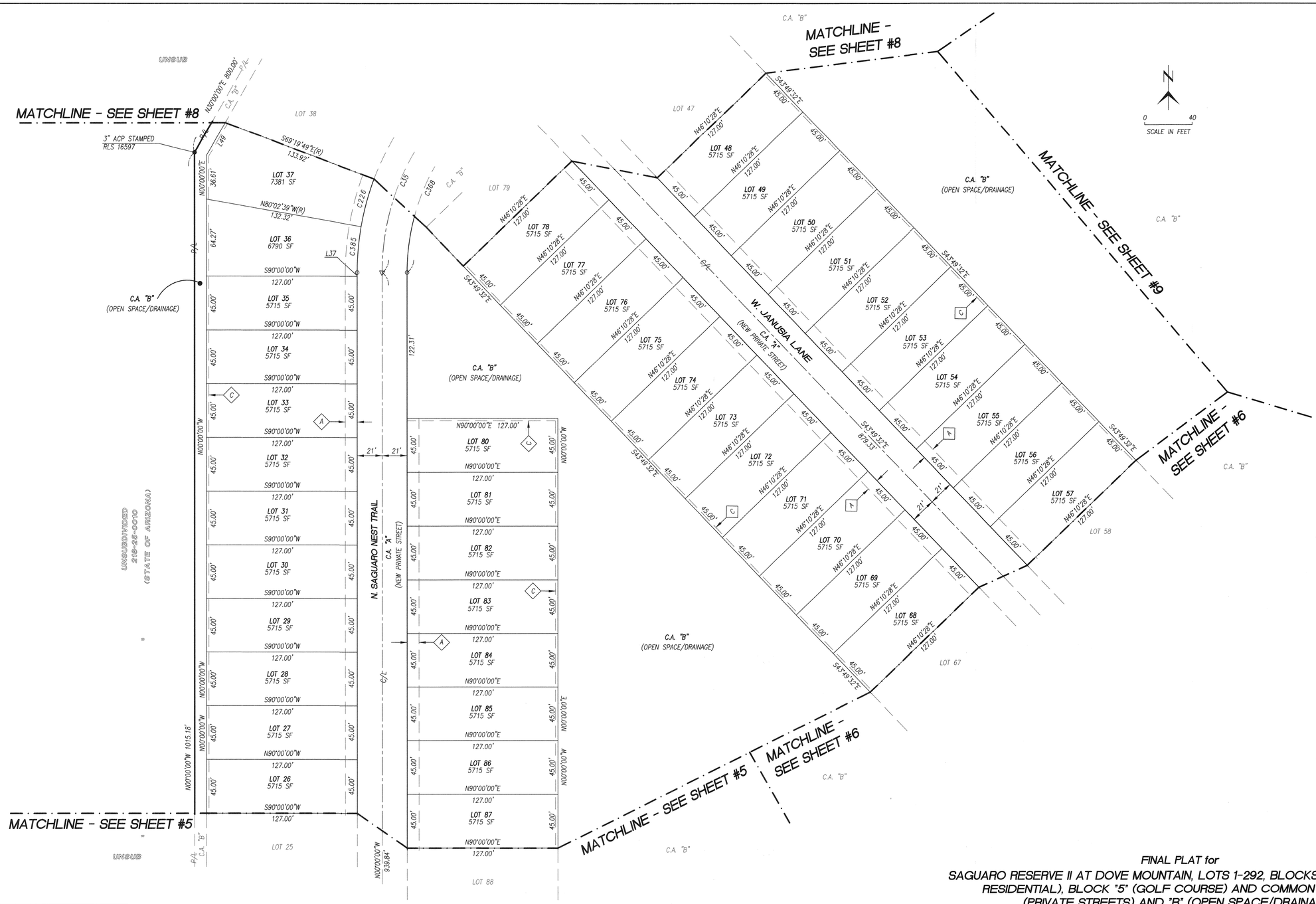
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#PRV2204-003 REF.: #PRV2109-005; PRV1803-002 JOB #2447.2 DATE: 6/30/2022 SHEET 6 OF 18

SEQUENCE #

SEQUENCE #



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FOR INTERIOR GEOMETRY ONLY

REGISTERED LAND SURVEYOR
16784
WILLIAM H. BAKER, JR.
ARIZONA U.S.A.

FINAL PLAT for
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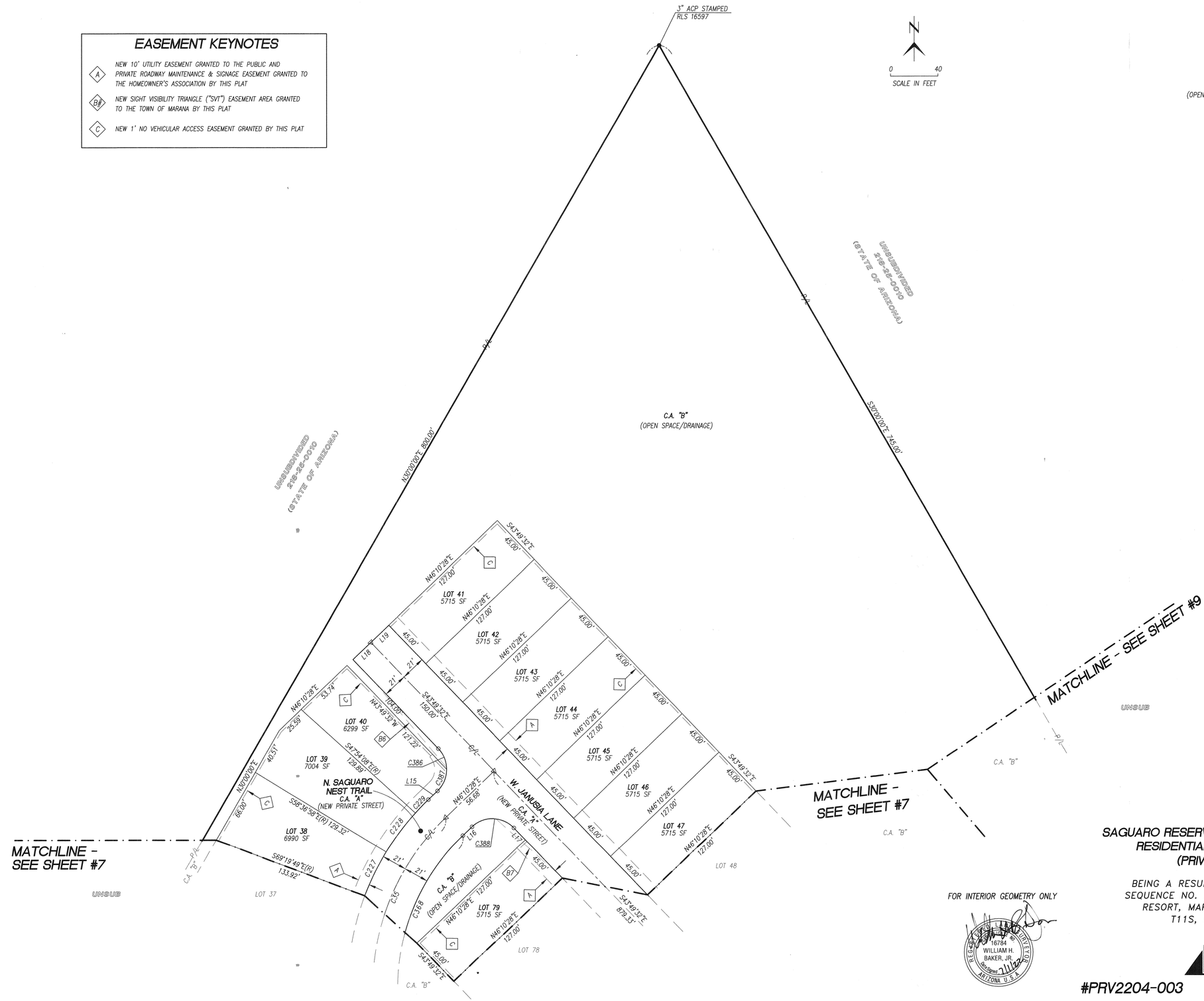
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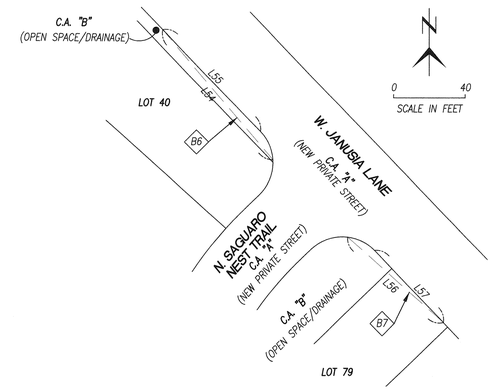
SEQUENCE #

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SIGHT VISIBILITY TRIANGLES ("SVT") - B6-B7

DETAIL – COMMON AREA "B" (NEAR LOTS 40 AND 79)

FOR INTERIOR GEOMETRY ONLY

16784
WILLIAM H.
BAKER, JR.
Date Signed 7/11/22
REGISTERED LAND SURVEYOR
ARIZONA U.S.A.

FINAL PLAT for
SAGUARO RESERVE II AT DOVE MOUNTAIN, LOTS 1-292, BLOCKS "1"-"4" (FUTURE RESIDENTIAL), BLOCK "5" (GOLF COURSE) AND COMMON AREAS "A" (PRIVATE STREETS) AND "B" (OPEN SPACE/DRAINAGE)

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#PRV2204-003 REF:: #PRV2109-005; PRV1803-002 JOB #2447.2 DATE: 6/30/2022 SHEET 8 OF 18

SEQUENCE #

SEQUENCE #

EASEMENT KEYNOTES

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N

0 40
SCALE IN FEET

UNSUB

N60°00'00"E 1206.70'

P/L

MATCHLINE - SEE SHEET #10

UNSUBDIVIDED
216-22-001G
(STATE OF ARIZONA)

C.A. "B"
(OPEN SPACE/DRAINAGE)

UNSUB

S30°00'00"E 745.00'

P/L

C.A. "B"

MATCHLINE - SEE SHEET #8

3" ACP STAMPED
RLS 16597

MATCHLINE - SEE SHEET #7

C.A. "B"
(OPEN SPACE/DRAINAGE)
2,003,512 SF

C.A. "B"

C.A. "B"

MATCHLINE - SEE SHEET #6

LOT 206

LOT 205
8255 SF

LOT 204
8255 SF

LOT 203
8255 SF

LOT 202
8255 SF

LOT 201
8255 SF

LOT 200
8255 SF

LOT 199
8255 SF

LOT 198
8255 SF

LOT 197

LOT 185

LOT 186
8255 SF

LOT 187
8255 SF

LOT 188
8255 SF

LOT 189
8255 SF

LOT 190
8255 SF

LOT 191
8255 SF

LOT 192
8255 SF

LOT 193

DEV. 100 YR.
F.P.L. LIMIT

LOTLINE/
DEV. 100 YR.
F.P.L. LIMIT

N46°10'28"E 65.00'

N43°49'32"W 127.00'

S43°49'32"E 127.00'

65.00'

N46°10'28"E 382.35'

N. BLUE JUNIPER LANE
C.A. "A"
(NEW PRIVATE STREET)

L284

L209

L283

L210

E.S.L.

21'

25'

DEV. 100
YR F.P.L./
FEMA "AO2"
ZONE LIMIT

MATCHLINE - SEE SHEET #10

MATCHLINE - SEE SHEET #11

MATCHLINE - SEE SHEET #14

MATCHLINE - SEE SHEET #6

C.A. "B"

C.A. "B"

C.A. "B"

C.A. "B"

FOR INTERIOR GEOMETRY ONLY

REGISTERED LAND SURVEYOR
16784
WILLIAM H.
BAKER, JR.
Date Signed 7/11/22
ARIZONA U.S.A.

FINAL PLAT for

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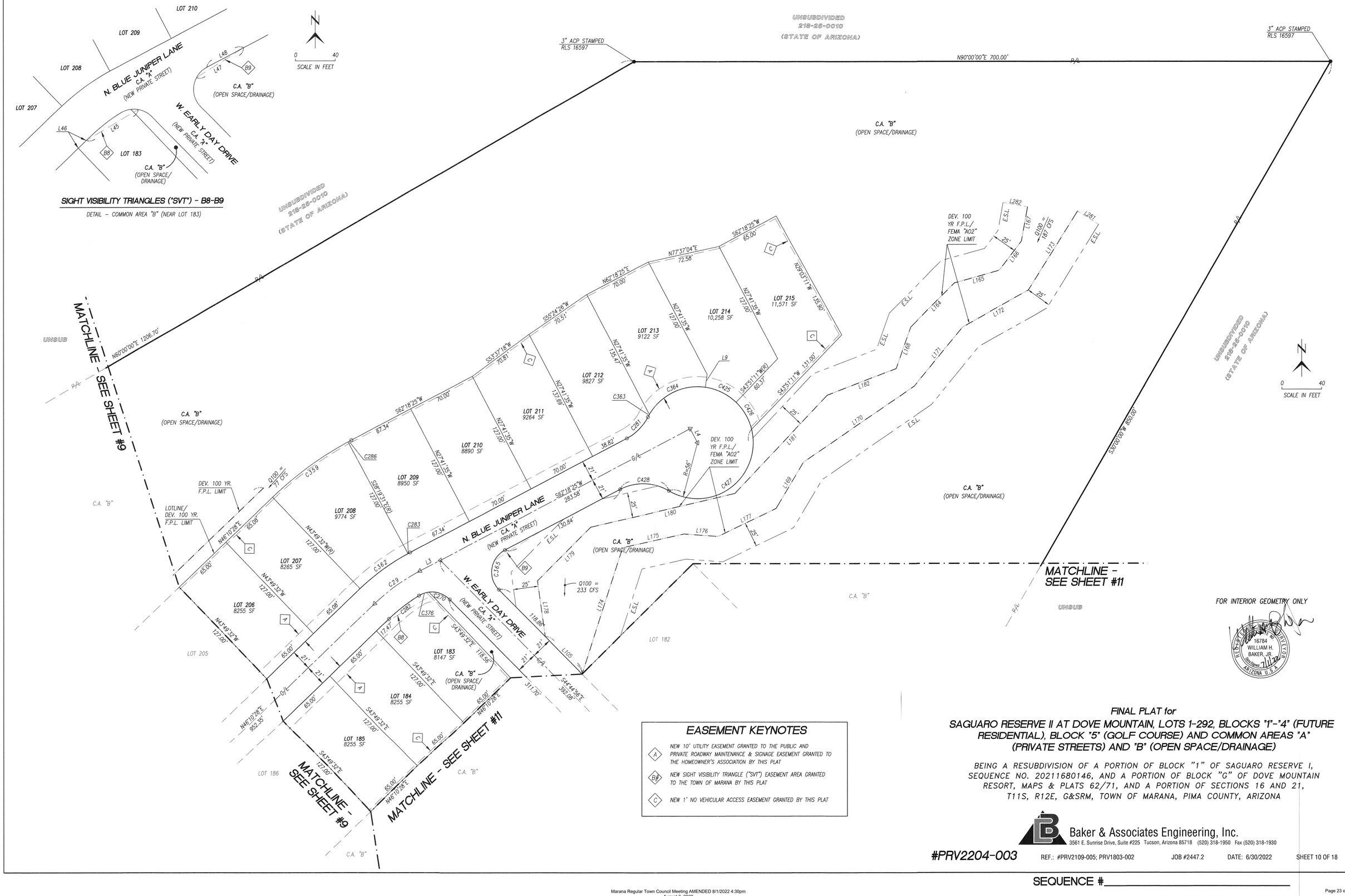
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#PRV2204-003 REF.: #PRV2109-005; PRV1803-002 JOB #2447.2 DATE: 6/30/2022 SHEET 9 OF 18

SEQUENCE #

SEQUENCE #



EASEMENT KEYNOTES

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FOR INTERIOR GEOMETRY ONLY

REGISTERED LAND SURVEYOR
16784
WILLIAM H. BAKER, JR.
Re-Registered
ARIZONA U.S.A.

FINAL PLAT for

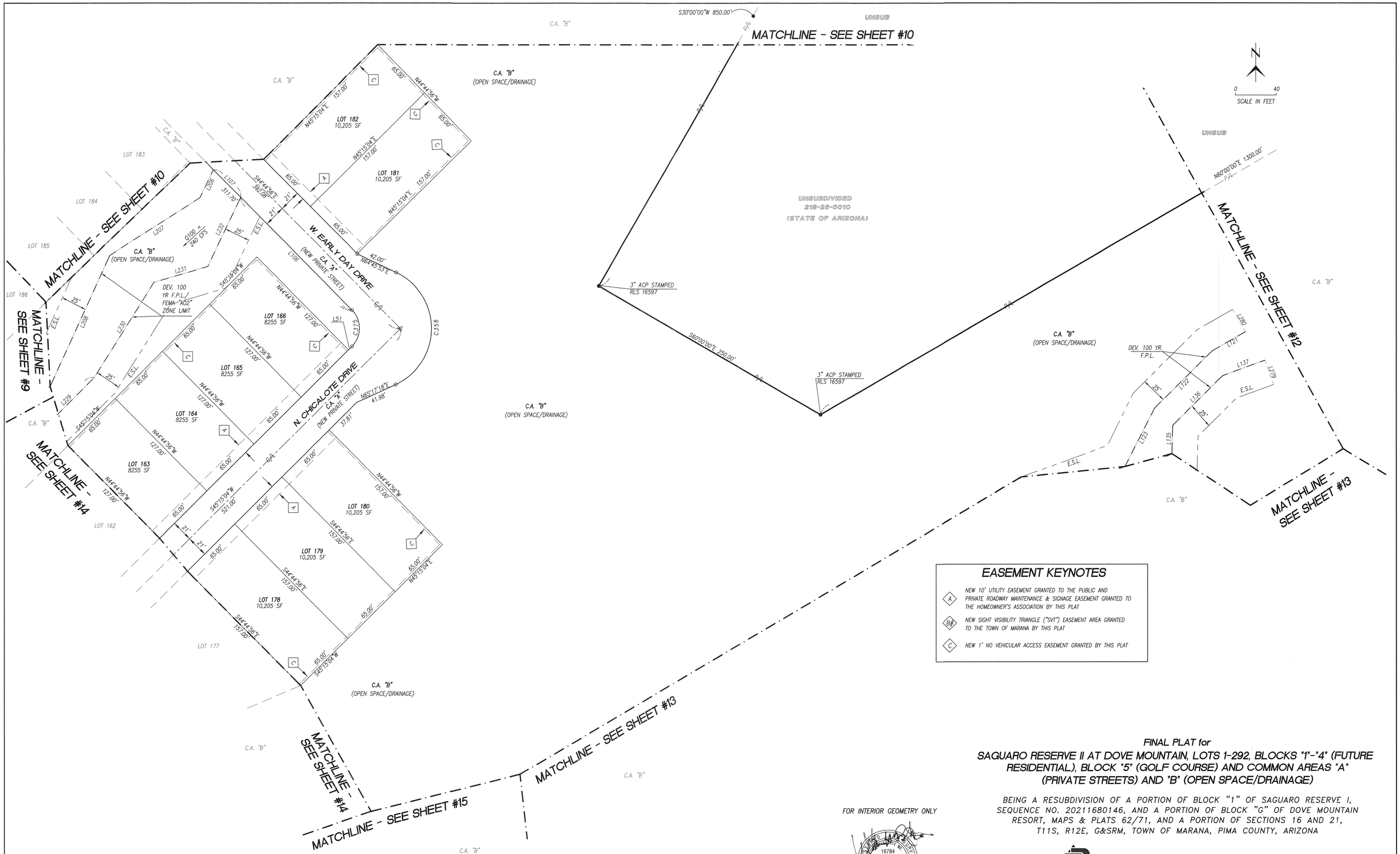
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SEQUENCE #



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FOR INTERIOR GEOMETRY ONLY

16784
WILLIAM H.
BAKER, JR.
Date Signed 7/1/22
REGISTERED LAND SURVEYOR
ARIZONA U.S.A.

FINAL PLAT for
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SEQUENCE #_____

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- (B) NEW SIGHT VISIBILITY TRIANGLE ("SVT") EASEMENT AREA GRANTED TO THE TOWN OF MARANA BY THIS PLAT
- (C) NEW 1' NO VEHICULAR ACCESS EASEMENT GRANTED BY THIS PLAT

SCRIBED X ON ROCK

0 40
SCALE IN FEET

UNSUBDIVIDED
216-26-0010
(STATE OF ARIZONA)

N60°00'00"E 1300.00'

P/L

S20°00'00"E 540.00'

UNSUBDIVIDED
216-26-0010
(STATE OF ARIZONA)

UNSUB

C.A. "B"
(OPEN SPACE/DRAINAGE)

5/8" REBAR TAGGED
RLS 26928

S60°00'00"W 252.55'

UNSUBDIVIDED
216-26-0010
(STATE OF ARIZONA)

MATCHLINE - SEE SHEET #11

C.A. "B"

5/8" REBAR TAGGED
RLS 26928

S11°37'46"E 90.16'

5/8" REBAR TAGGED
RLS 26928

S63°12'23"W 199.51'

LOT 78

BOULDER BRIDGE PASS IV
AT DOVE MOUNTAIN
SEQ # 20201060245

MATCHLINE - SEE SHEET #13

C.A. "B"

S74°35'37"W 254.03'

5/8" REBAR TAGGED
RLS 26928

LOT 77

LOT 76

FOR INTERIOR GEOMETRY ONLY

REGISTERED LAND SURVEYOR
16784
WILLIAM H.
BAKER, JR.
Date Signed 7/11/22
ARIZONA U.S.A.

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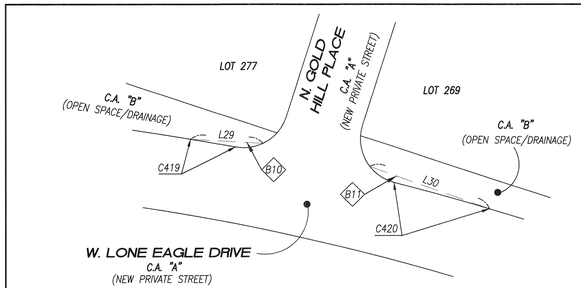
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SEQUENCE #

SEQUENCE #

SEQUENCE #



SIGHT VISIBILITY TRIANGLES ("SVT") - B10-B11

DETAIL - COMMON AREA "B" (NEAR LOTS 1269 AND 277)



EASEMENT KEYNOTES

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FOR INTERIOR GEOMETRY ONLY

REGISTERED LAND SURVEYOR
16784
WILLIAM H. BAKER, JR.
Expiration 7/1/23
ARIZONA U.S.A.

FINAL PLAT for

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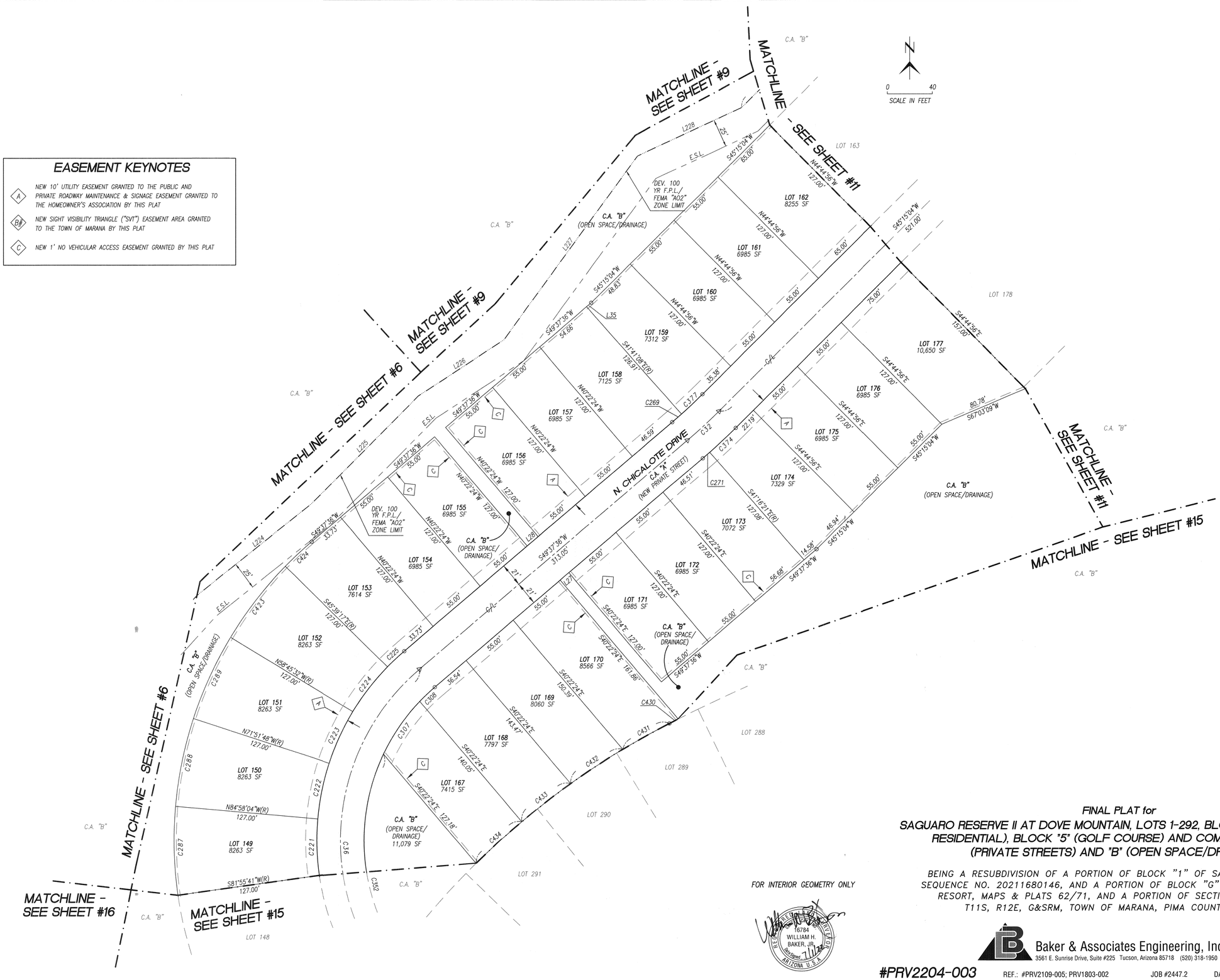
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SEQUENCE #

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FOR INTERIOR GEOMETRY ONLY

6784 WILLIAM H. BAKER, JR. 6/30/2022 REGISTERED LAND SURVEYOR ARIZONA U.S.A.

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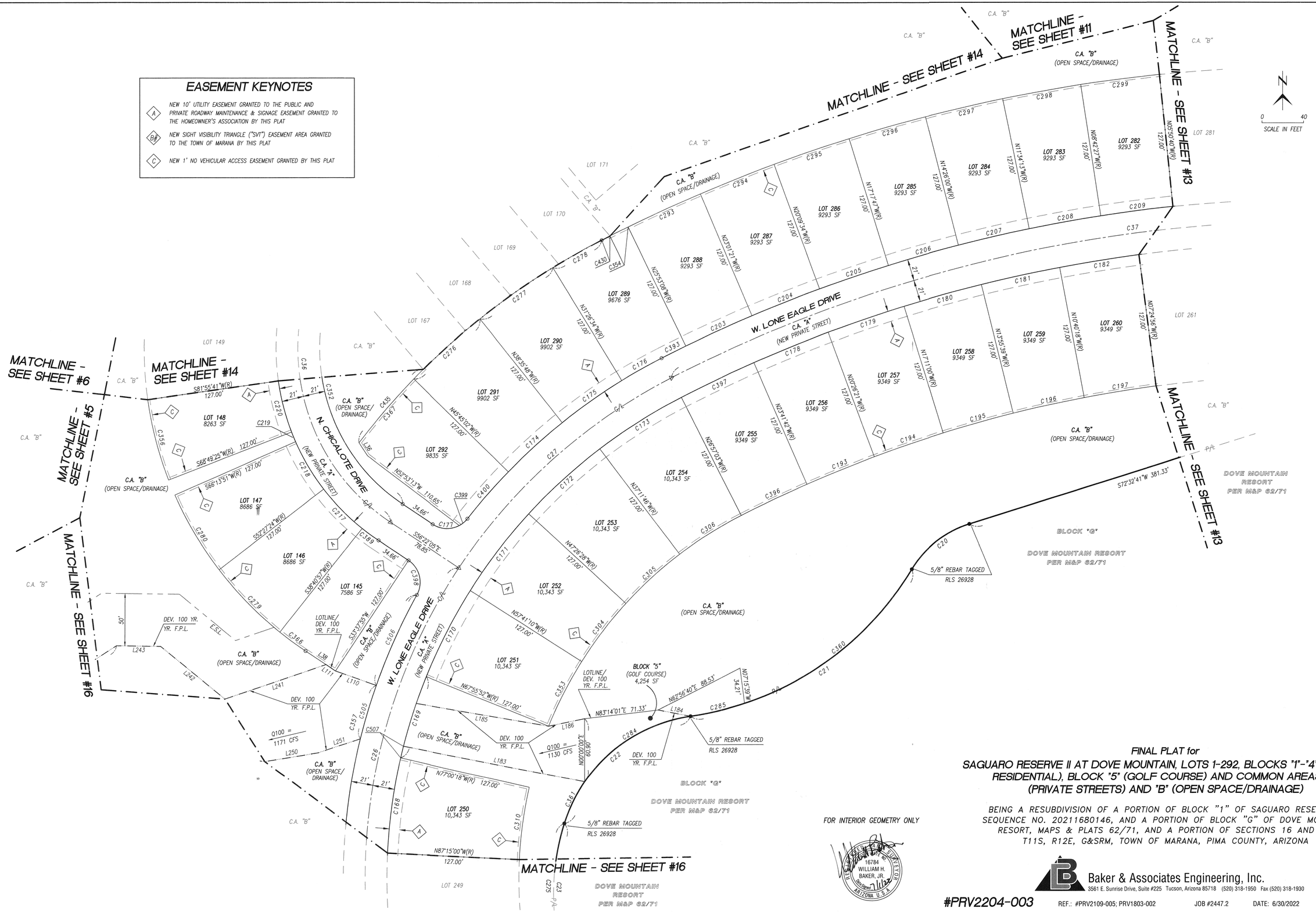
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SEQUENCE #

SEQUENCE #

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N

0 40
SCALE IN FEET

MATCHLINE - SEE SHEET #5

MATCHLINE - SEE SHEET #15

MATCHLINE - SEE SHEET #4

MATCHLINE - SEE SHEET #17

C.A. "B"

C.A. "B" (OPEN SPACE/DRAINAGE)

C.A. "B" (OPEN SPACE/ DRAINAGE)

C.A. "A" (NEW PRIVATE STREET)

N. QUAIL BRUSH PASS

W. LONE EAGLE DRIVE

C.A. "A" (NEW PRIVATE STREET)

E.S.L.

FEMA "AO2" ZONE LIMIT

DEV. 100 YR. F.P.L. LIMIT

DEV. 100 YR. F.P.L.

DEV. 100 YR F.P.L./ FEMA "AO2" ZONE LIMIT

LOT 216 9838 SF

LOT 217 8411 SF

LOT 218 8411 SF

LOT 219 8411 SF

LOT 220 8411 SF

LOT 221 8411 SF

LOT 222 8411 SF

LOT 223

LOT 242

LOT 243 8405 SF

LOT 244 8405 SF

LOT 245 8405 SF

LOT 246 8405 SF

LOT 247 8398 SF

LOT 248 10,343 SF

LOT 249 10,343 SF

LOT 250

BLOCK "3" (FUTURE RESIDENTIAL) 19,123 SF

BLOCK "4" (FUTURE RESIDENTIAL) 21,139 SF

BLOCK "G" DOVE MOUNTAIN RESORT PER MAP 62/71

DOVE MOUNTAIN RESORT PER MAP 62/71

UNSUBDIVIDED 219-22-002R

5/8" REBAR TAGGE RLS 26928

N87°15'00"W(R) 127.00'

S82°30'18"W(R) 127.00'

S72°15'36"W(R) 164.10'

N23°53'19"W 117.04'

N87°04'34"E

N50°54'38"E 167.30'

N40°56'46"W 134.07'

S42°33'05"W 1140.25'

183.79'

149.35'

37.10'

50'

21'

P/L

C/L

FOR INTERIOR GEOMETRY ONLY

REGISTERED LAND SURVEYOR 16784 WILLIAM H. BAKER, JR. Registered ARIZONA U.S.A.

FINAL PLAT for

SAGUARO RESERVE II AT DOVE MOUNTAIN, LOTS 1-292, BLOCKS "1"-"4" (FUTURE RESIDENTIAL), BLOCK "5" (GOLF COURSE) AND COMMON AREAS "A" (PRIVATE STREETS) AND "B" (OPEN SPACE/DRAINAGE)

BEING A RESUBDIVISION OF A PORTION OF BLOCK "1" OF SAGUARO RESERVE I, SEQUENCE NO. 20211680146, AND A PORTION OF BLOCK "G" OF DOVE MOUNTAIN RESORT, MAPS & PLATS 62/71, AND A PORTION OF SECTIONS 16 AND 21, T11S, R12E, G&SRM, TOWN OF MARANA, PIMA COUNTY, ARIZONA

Baker & Associates Engineering, Inc.
3561 E. Sunrise Drive, Suite #225 Tucson, Arizona 85718 (520) 318-1950 Fax (520) 318-1930

#PRV2204-003 REF.: #PRV2109-005; PRV1803-002 JOB #2447.2 DATE: 6/30/2022 SHEET 16 OF 18

SEQUENCE #_____

SEQUENCE #_____

SEQUENCE #

MATCHLINE - SEE SHEET #4

MATCHLINE - SEE SHEET #16

C.A. "B"

LOT 222

LOT 243

BLOCK "3"

UNPLUB

LOT 119

LOT 120

LOT 121

LOT 122

LOT 232

LOT 233

LOT 149

LOT 150

C.A. "B"
(OPEN SPACE/DRAINAGE)

C.A. "B"
(OPEN SPACE/DRAINAGE)
173,823 SF

DEV. 100 YR F.P.L./ FEMA "AO2" ZONE

FEMA "AO2" ZONE LIMIT

DEV. 100 YR. F.P.L. LIMIT

DEV. 100 YR. F.P.L.

Q100 = 1460 CFS

Q100 = 58 CFS

Q100 = 96 CFS

E.S.L.

50'

25'

21'

N. QUAIL BRUSH PASS
C.A. "A"
(NEW PRIVATE STREET)

N. DOVE RESERVE DRIVE
EX. 42' PRIVATE R/W PER SEQ. #20211680146

LOT 223
8411 SF

LOT 224
8411 SF

LOT 225
7117 SF

LOT 226
7117 SF

LOT 227
7117 SF

LOT 228
7117 SF

LOT 229
7117 SF

LOT 230
7117 SF

LOT 231
7117 SF

LOT 232
7117 SF

LOT 233
7112 SF

LOT 234
7112 SF

LOT 235
7112 SF

LOT 236
7112 SF

LOT 237
7112 SF

LOT 238
7112 SF

LOT 239
7112 SF

LOT 240
7112 SF

LOT 241
8405 SF

LOT 242
8405 SF

N44°44'43"W(R) 127.00'
N45°03'45"W(R) 127.00'
N47°22'58"W(R) 127.00'
N47°42'34"W(R) 127.00'
N48°49'35"W(R) 127.00'
N48°36'37"W(R) 127.00'
N51°03'38"W(R) 127.00'
N52°10'40"W(R) 127.00'
N53°17'41"W(R) 127.00'
N54°24'43"W(R) 127.00'
N55°31'44"W(R) 127.00'
S56°38'46"E(R) 127.00'
N56°38'46"W 4.00'
N55°43'58"W(R) 127.00'
S56°55'08"E(R) 127.00'
N52°10'29"W(R) 127.00'
N53°21'18"W(R) 127.00'
N54°32'08"W(R) 127.00'
N48°48'08"W(R) 127.00'
N47°25'49"W(R) 127.00'
N47°12'49"W(R) 127.00'
N45°49'43"W(R) 127.00'
N44°24'32"W(R) 127.00'

D=42°36'24"
R=1000.00'
L=743.63'

D=00°08'04"
R=1000.00'
L=2.35'

D=00°27'13"
R=890.00'
L=7.05'

S42°33'05"W 1140.25'

764.38'

UNSUBDIVIDED
219-22-002A

EASEMENT KEYNOTES

- (A) NEW 10' UTILITY EASEMENT GRANTED TO THE PUBLIC AND PRIVATE ROADWAY MAINTENANCE & SIGNAGE EASEMENT GRANTED TO THE HOMEOWNER'S ASSOCIATION BY THIS PLAT
- (B#) NEW SIGHT VISIBILITY TRIANGLE ("SVT") EASEMENT AREA GRANTED TO THE TOWN OF MARANA BY THIS PLAT
- (C) NEW 1' NO VEHICULAR ACCESS EASEMENT GRANTED BY THIS PLAT

SAGUARO RESERVE I
SEQ. #20211680146
C.A. "B"

SAGUARO RESERVE I
SEQ. #20211680146
BLOCK "1"

0 40
SCALE IN FEET

SIGHT VISIBILITY TRIANGLES ("SVT") - B12-B13

DETAIL - COMMON AREA "B" (NEAR LOT 11)

SEE SHEET #3 FOR REMAINDER OF PROJECT

FOR INTERIOR GEOMETRY ONLY

REGISTERED LAND SURVEYOR
16784
WILLIAM H. BAKER, JR.
11/22
ARIZONA U.S.A.

FINAL PLAT for
SAGUARO RESERVE II AT DOVE MOUNTAIN, LOTS 1-292, BLOCKS "1"-"4" (FUTURE RESIDENTIAL), BLOCK "5" (GOLF COURSE) AND COMMON AREAS "A" (PRIVATE STREETS) AND "B" (OPEN SPACE/DRAINAGE)

BEING A RESUBDIVISION OF A PORTION OF BLOCK "1" OF SAGUARO RESERVE I, SEQUENCE NO. 20211680146, AND A PORTION OF BLOCK "G" OF DOVE MOUNTAIN RESORT, MAPS & PLATS 62/71, AND A PORTION OF SECTIONS 16 AND 21, T11S, R12E, G&SRM, TOWN OF MARANA, PIMA COUNTY, ARIZONA

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#PRV2204-003 REF.: #PRV2109-005; PRV1803-002 JOB #2447.2 DATE: 6/30/2022 SHEET 17 OF 18

SEQUENCE #_____

NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH
C1	74°17'16"	25.00	32.41
C2	01°45'44"	429.00	13.19
C3	99°38'39"	25.00	43.48
C4	06°41'34"	1011.00	118.10
C5	48°11'23"	50.00	42.05
C6	32°03'15"	100.00	55.95
C7	41°24'35"	100.00	72.27
C8	15°28'35"	1011.00	273.08
C9	85°59'52"	25.00	37.52
C10	00°16'22"	2769.00	13.18
C11	00°10'28"	2811.00	8.56
C12	94°35'24"	25.00	41.27
C13	37°43'58"	979.00	644.73
C14	74°03'34"	25.00	32.31
C15	111°46'55"	25.00	48.77
C16	06°39'25"	979.00	113.74
C17	32°13'24"	221.00	124.29
C18	79°13'22"	25.00	34.57
C19	48°28'07"	175.00	148.04
C20	41°09'50"	100.00	71.84
C21	50°22'48"	300.00	263.79
C22	64°14'30"	150.00	168.18
C23	62°07'22"	225.00	243.96
C24	41°15'39"	500.00	360.07
C25	41°49'59"	200.00	146.02
C26	36°33'21"	540.00	344.53
C27	29°25'02"	540.00	277.25
C28	06°13'39"	1380.00	149.99
C29	16°07'58"	200.00	56.31
C30	45°00'00"	200.00	157.08
C31	54°38'54"	580.00	553.20
C32	04°22'32"	500.00	38.18
C33	23°07'24"	200.00	80.72
C34	21°05'59"	2790.00	1027.44
C35	46°10'28"	200.00	161.18
C36	105°59'42"	200.00	369.99
C37	39°18'13"	1380.00	946.65
C38	33°51'02"	540.00	319.03

NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH
C101	05°04'34"	728.00	64.50
C102	05°04'34"	728.00	64.50
C103	05°04'34"	601.00	53.25
C104	05°04'34"	601.00	53.25
C105	03°47'04"	601.00	39.70
C106	05°04'34"	601.00	53.25
C107	05°04'34"	601.00	53.25
C108	05°04'34"	601.00	53.25
C109	05°04'34"	601.00	53.25
C110	05°04'34"	601.00	53.25
C111	05°04'34"	601.00	53.25
C112	05°05'36"	601.00	53.43
C113	00°26'40"	601.00	4.66
C114	07°03'15"	559.00	68.82
C115	05°19'36"	559.00	51.97
C116	07°03'15"	559.00	68.82
C117	07°03'15"	559.00	68.82
C118	07°03'15"	559.00	68.82
C119	07°02'03"	559.00	68.63
C120	07°04'28"	559.00	69.02
C121	03°27'22"	559.00	33.72
C122	07°33'04"	361.00	47.58
C123	07°37'59"	361.00	48.09
C124	07°43'13"	361.00	48.64
C125	07°45'15"	361.00	48.86
C126	00°58'06"	361.00	6.10
C127	05°04'34"	728.00	64.50
C128	05°04'34"	728.00	64.50
C129	05°04'34"	728.00	64.50
C130	05°04'34"	728.00	64.50
C131	05°04'34"	728.00	64.50
C132	05°05'36"	728.00	64.72
C133	00°26'40"	728.00	5.65
C134	07°03'15"	432.00	53.19
C135	03°56'08"	221.00	15.18
C136	10°42'50"	221.00	41.33
C137	10°42'50"	221.00	41.33
C138	10°42'50"	221.00	41.33
C139	10°42'50"	361.00	67.50
C140	10°35'36"	361.00	66.74
C141	33°44'26"	179.00	105.41
C142	39°44'50"	52.00	36.07
C143	08°55'21"	348.00	54.19
C144	05°15'10"	52.00	4.77
C145	11°15'34"	179.00	35.18
C146	09°03'32"	361.00	57.08
C147	08°55'21"	221.00	34.42
C148	03°32'23"	432.00	26.69
C149	05°04'34"	728.00	64.50
C150	07°27'42"	361.00	47.01
C151	03°32'23"	559.00	34.54
C152	04°43'01"	601.00	49.48
C153	04°43'01"	728.00	59.93
C154	08°35'41"	479.00	71.85
C155	08°35'41"	479.00	71.85
C156	08°35'41"	479.00	71.85
C157	08°35'41"	479.00	71.85
C158	06°23'47"	479.00	53.48
C159	05°49'39"	521.00	52.99
C160	05°49'39"	521.00	52.99
C161	05°49'39"	521.00	52.99
C162	05°49'39"	521.00	52.99
C163	05°49'39"	521.00	52.99
C164	05°50'05"	521.00	53.06
C165	03°42'33"	521.00	33.73
C166	10°14'42"	519.00	92.80
C167	10°14'42"	519.00	92.80
C168	10°14'42"	519.00	92.80
C169	09°04'26"	519.00	82.19
C170	10°14'42"	519.00	92.80
C171	10°14'42"	519.00	92.80
C172	10°14'42"	519.00	92.80
C173	10°14'42"	519.00	92.80
C174	07°09'14"	561.00	70.05
C175	07°09'14"	561.00	70.05
C176	04°29'31"	561.00	43.98
C177	61°49'52"	25.00	26.98
C178	03°15'21"	1359.00	77.23
C179	03°15'21"	1359.00	77.23
C180	03°15'21"	1359.00	77.23

NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH
C181	03°15'21"	1359.00	77.23
C182	03°15'21"	1359.00	77.23
C183	03°15'21"	1359.00	77.23
C184	03°15'21"	1359.00	77.23
C185	03°15'21"	1359.00	77.23
C186	03°15'21"	1359.00	77.23
C187	00°39'04"	1359.00	15.44
C188	03°15'21"	1359.00	77.23
C189	03°15'21"	1359.00	77.23
C190	03°15'21"	1359.00	77.23
C191	02°33'13"	1359.00	60.57
C192	00°42'08"	1359.00	16.65
C193	03°15'21"	1232.00	70.01
C194	03°15'21"	1232.00	70.01
C195	03°15'21"	1232.00	70.01
C196	03°15'21"	1232.00	70.01
C197	03°15'21"	1232.00	70.01
C198	03°15'21"	1232.00	70.01
C199	03°15'21"	1232.00	70.01
C200	03°15'21"	1232.00	70.01
C201	03°15'21"	1232.00	70.01
C202	13°53'12"	25.00	6.06
C203	02°51'47"	1401.00	70.01
C204	02°51'47"	1401.00	70.01
C205	02°51'47"	1401.00	70.01
C206	02°51'47"	1401.00	70.01
C207	02°51'47"	1401.00	70.01
C208	02°51'47"	1401.00	70.01
C209	02°51'47"	1401.00	70.01
C210	02°51'47"	1401.00	70.01
C211	02°51'47"	1401.00	70.01
C212	02°51'47"	1401.00	70.01
C213	02°51'47"	1401.00	70.01
C214	05°04'15"	1401.00	123.99
C215	58°59'44"	25.00	25.74
C216	15°28'23"	25.00	6.75
C217	13°46'27"	221.00	53.13
C218	13°46'27"	221.00	53.13
C219	02°35'34"	221.00	10.00
C220	13°06'16"	221.00	50.55
C221	13°06'16"	221.00	50.55
C222	13°06'16"	221.00	50.55
C223	13°06'16"	221.00	50.55
C224	13°06'16"	221.00	50.55
C225	05°16'53"	221.00	20.37
C226	10°42'50"	221.00	41.33
C227	10°42'50"	221.00	41.33
C228	10°42'50"	221.00	41.33
C229	04°04'36"	221.00	15.72
C230	01°11'10"	2642.00	54.69
C231	01°11'10"	2642.00	54.69
C232	01°11'10"	2642.00	54.69
C233	01°11'10"	2642.00	54.69
C234	01°11'10"	2642.00	54.69
C235	01°11'10"	2642.00	54.69
C236	01°11'10"	2642.00	54.69
C237	01°24'06"	2642.00	64.63
C238	01°24'06"	2642.00	64.63
C239	01°24'06"	2642.00	64.63
C240	01°24'06"	2642.00	64.63
C241	01°24'06"	2642.00	64.63
C242	01°24'06"	2642.00	64.63
C243	01°24'02"	2642.00	64.58
C244	01°11'10"	2769.00	57.32
C245	01°11'10"	2769.00	57.32
C246	01°11'10"	2769.00	57.32
C247	01°11'10"	2769.00	57.32
C248	01°11'10"	2769.00	57.32
C249	01°11'10"	2769.00	57.32
C250	01°11'10"	2769.00	57.32
C251	01°24'06"	2769.00	67.74
C252	01°24'06"	2769.00	67.74
C253	01°24'06"	2769.00	67.74
C254	01°24'06"	2769.00	67.74
C255	01°24'06"	2769.00	67.74
C256	01°24'06"	2769.00	67.74
C257	01°24'02"	2769.00	67.68
C258	00°41'01"	2769.00	33.04
C259	01°07'02"	2938.00	57.28
C260	01°07'02"	2938.00	57.28

NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH
C261	01°07'02"	2938.00	57.28
C262	01°07'02"	2938.00	57.28
C263	01°07'02"	2938.00	57.28
C264	01°07'02"	2938.00	57.28
C265	01°07'02"	2938.00	57.28
C266	01°19'13"	2938.00	67.70
C267	01°19'13"	2938.00	67.70
C268	01°19'13"	2938.00	67.70
C269	01°18'44"	479.00	10.97
C270	52°22'24"	25.00	22.85
C271	00°53'57"	521.00	8.18
C272	31°04'25"	56.00	30.37
C273	53°15'09"	56.00	52.05
C274	13°34'01"	50.00	11.84
C275	42°12'45"	225.00	165.77
C276	07°09'14"	688.00	85.90
C277	07°09'14"	688.00	85.90
C278	04°29'31"	688.00	53.94
C279	13°46'27"	348.00	83.66
C280	13°46'27"	348.00	83.66
C281	34°59'40"	50.00	30.54
C282	12°12'57"	179.00	38.16
C283	00°37'56"	221.00	2.44
C284	47°10'06"	150.00	123.49
C285	10°13'26"	300.00	53.53
C286	00°37'56"	348.00	3.84
C287	13°06'16"	348.00	79.59
C288	13°06'16"	348.00	79.59
C289	13°06'16"	348.00	79.59
C290	03°15'21"	1232.00	70.01
C291	03°15'21"	1232.00	70.01
C292	03°15'21"	1232.00	70.01
C293	02°51'47"	1528.00	76.35
C294	02°51'47"	1528.00	76.35
C295	02°51'47"	1528.00	76.35
C296	02°51'47"	1528.00	76.35
C297	02°51'47"	1528.00	76.35
C298	02°51'47"	1528.00	76.35
C299	02°51'47"	1528.00	76.35
C300	02°51'47"	1528.00	76.35
C301	02°51'47"	1528.00	76.35
C302	02°51'47"	1528.00	76.35
C303	02°51'47"	1528.00	76.35
C304	10°14'42"	392.00	70.09
C305	10°14'42"	392.00	70.09
C306	10°14'42"	392.00	70.09
C307	18°18'36"	179.00	57.20
C308	05°55'10"	179.00	18.49
C309	10°14'42"	392.00	70.09
C310	10°14'42"	392.00	70.09
C311	16°19'49"	561.00	159.89
C312	01°19'13"	2938.00	67.70
C313	01°19'13"	2938.00	67.70
C314	01°19'13"	2938.00	67.70
C315	01°19'13"	2938.00	67.70
C316	01°07'02"	2811.00	54.81
C317	01°07'02"	2811.00	54.81
C318	01°07'02"	2811.00	54.81
C319	01°07'02"	2811.00	54.81
C320	01°07'02"	2811.00	54.81
C321	01°07'02"	2811.00	54.81
C322	01°07'02"	2811.00	54.81
C323	01°07'02"	2811.00	54.81
C324	01°19'13"	2811.00	64.77
C325	01°19'13"	2811.00	64.77
C326	01°19'13"	2811.00	64.77
C327	01°19'13"	2811.00	64.77
C328	01°19'13"	2811.00	64.77
C329	01°19'13"	2811.00	64.77
C330	01°19'13"	2811.00	64.77
C331	01°19'13"	2811.00	64.77
C332	00°06'07"	2811.00	5.00
C333	05°49'39"	648.00	65.91
C334	05°49'39"	648.00	65.91
C335	05°49'39"	648.00	65.91
C336	05°49'39"	648.00	65.91
C337	05°49'39"	648.00	65.91
C338	05°50'05"	648.00	65.99
C339	03°42'33"	648.00	41.95
C340	08°35'41"	352.00	52.80

NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH
C341	08°35'41"	352.00	52.80
C342	08°35'41"	352.00	52.80
C343	06°23'47"	352.00	39.30
C344	08°35'41"	352.00	52.80
C345	02°34'48"	648.00	29.18
C346	114°43'56"	25.00	50.06
C347	00°06'07"	2938.00	5.23
C348	01°19'13"	2938.00	67.70
C349	14°19'56"	348.00	87.05
C350	11°35'34"	561.00	113.51
C351	10°14'42"	392.00	70.09
C352	81°45'56"	179.00	255.45
C353	10°14'42"	392.00	70.09
C354	00°44'05"	1528.00	19.60
C355	03°15'21"	1232.00	70.01
C356	13°06'16"	348.00	79.59
C357	28°35'24"	561.00	279.93
C358	130°03'11"	60.00	136.19
C359	15°30'02"	348.00	94.15
C360	40°09'22"	300.00	210.26
C361	17°04'23"	150.00	44.70
C362	15°30'02"	221.00	59.79
C363	03°04'09"	56.00	3.00
C364	67°43'26"	56.00	66.19
C365	107°03'21"	25.00	46.71
C366	05°03'03"	348.00	30.68
C367	06°43'12"	688.00	80.69
C368	46°10'28"	179.00	144.26
C369	10°16'51"	52.00	9.33
C370	19°54'38"	225.00	78.19
C371	23°09'24"	179.00	72.34
C372	56°34'45"	50.00	49.37
C373	165°49'12"	56.00	162.07
C374	03°28'35"	521.00	31.61
C375	90°00'00"	25.00	39.27
C376	24°29'16"	25.00	10.68
C377	03°03'48"	479.00	25.61
C378	53°11'15"	25.00	23.21
C379	01°07'02"	2938.00	57.28
C380	02°43'54"	179.00	8.53
C381	67°04'25"	25.00	29.27
C382	14°19'56"	221.00	55.28
C383	00°54'48"	2769.00	44.14
C384	01°11'10"	2642.00	54.69
C385	09°57'21"	221.00	38.40
C386	43°31'58"	25.00	18.99
C387	46°28'02"	25.00	20.28
C388	90°00'00"	25.00	39.27
C389	05°03'03"	221.00	19.48
C390	74°31'37"	25.00	32.52
C391	90°00'00"	25.00	39.27
C392	23°34'41"	25.00	10.29
C393	01°03'55"	1401.00	26.05
C394	79°49'31"	25.00	34.83
C395	04°11'13"	1401.00	102.38
C396	03°15'21"	1232.00	70.01
C397	03°15'21"	1359.00	77.23
C398	85°29'52"	25.00	37.31
C399	23°40'00"	25.00	10.33
C400	06°06'55"	561.00	59.88
C401	18°35'50"	519.00	168.46
C402	02°34'48"	521.00	23.46
C403	00°29'10"	479.00	4.06
C404	21°06'01"	25.00	9.21
C405	13°58'45"	25.00	6.10
C406	18°40'35"	179.00	58.35
C407	31°33'08"	52.00	28.64
C408	13°46'27"	221.00	53.13
C409	13°46'27"	221.00	53.13
C410	06°23'13"	221.00	24.64
C411	07°53'52"	221.00	30.46
C412	06°23'13"	348.00	38.79
C413	13°46'27"	348.00	83.66
C414	13°46'27"	348.00	83.66
C415	07°53'52"	348.00	47.97
C416	00°42'42"	1011.00	12.56
C417	37°43'58"	979.00	644.73
C418	04°00'14"	979.00	68.41
C419	01°02'19"	1401.00	25.40
C420	02°16'06"	1401.00	55.46

NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH
C421	05°44'50"	979.00	98.20
C422	00°48'25"	1011.00	14.24
C423	13°06'16"	348.00	79.59
C424	05°16'53"	348.00	32.08
C425	35°44'51"	56.00	34.94
C426	32°23'33"	56.00	31.66
C427	134°42'05"	56.00	131.66
C428	58°38'24"	50.00	51.17
C429	00°29'10"	352.00	2.99
C430	00°19'50"	1528.00	8.82
C431	03°56'46"	688.00	47.38
C432	04°37'04"	688.00	55.45
C433	04°35'10"	688.00	55.07
C434	04°35'04"	688.00	55.05
C435	07°47'07"	688.00	93.49
C436	00°13'01"	2769.00	10.48
C437	00°19'35"	2811.00	16.02
C438	07°16'53"	361.00	45.88
C439	01°26'28"	361.00	9.08

NUMBER	DELTA ANGLE	RADIUS	ARC LENGTH
C501	09°28'05"	979.00	161.78
C502	13°21'03"	979.00	228.12
C503	03°19'12"	1011.00	58.58
C504	06°35'06"	1011.00	116.19
C505	05°30'05"	561.00	53.87
C506	09°42'51"	561.00	95.11
C507	01°15'10"	519.00	11.35
C508	02°33'48"	559.00	25.01
C509	00°32'29"	601.00	5.68
C510	01°08'39"	601.00	12.00

SEQUENCE #

CURVE TABLE

FOR INTERIOR GEOMETRY ONLY

REGISTERED LAND SURVEYOR 16784 WILLIAM H. BAKER, JR. 6/30/2022 ARIZONA U.S.A.

FINAL PLAT for

SAGUARO RESERVE II AT DOVE MOUNTAIN, LOTS 1-292, BLOCKS "1"-"4" (FUTURE RESIDENTIAL), BLOCK "5" (GOLF COURSE) AND COMMON AREAS "A" (PRIVATE STREETS) AND "B" (OPEN SPACE/DRAINAGE)

BEING A RESUBDIVISION OF A PORTION OF BLOCK "1" OF SAGUARO RESERVE I, SEQUENCE NO. 20211680146, AND A PORTION OF BLOCK "G" OF DOVE MOUNTAIN RESORT, MAPS & PLATS 62/71, AND A PORTION OF SECTIONS 16 AND 21, T11S, R12E, G&SRM, TOWN OF MARANA, PIMA COUNTY, ARIZONA

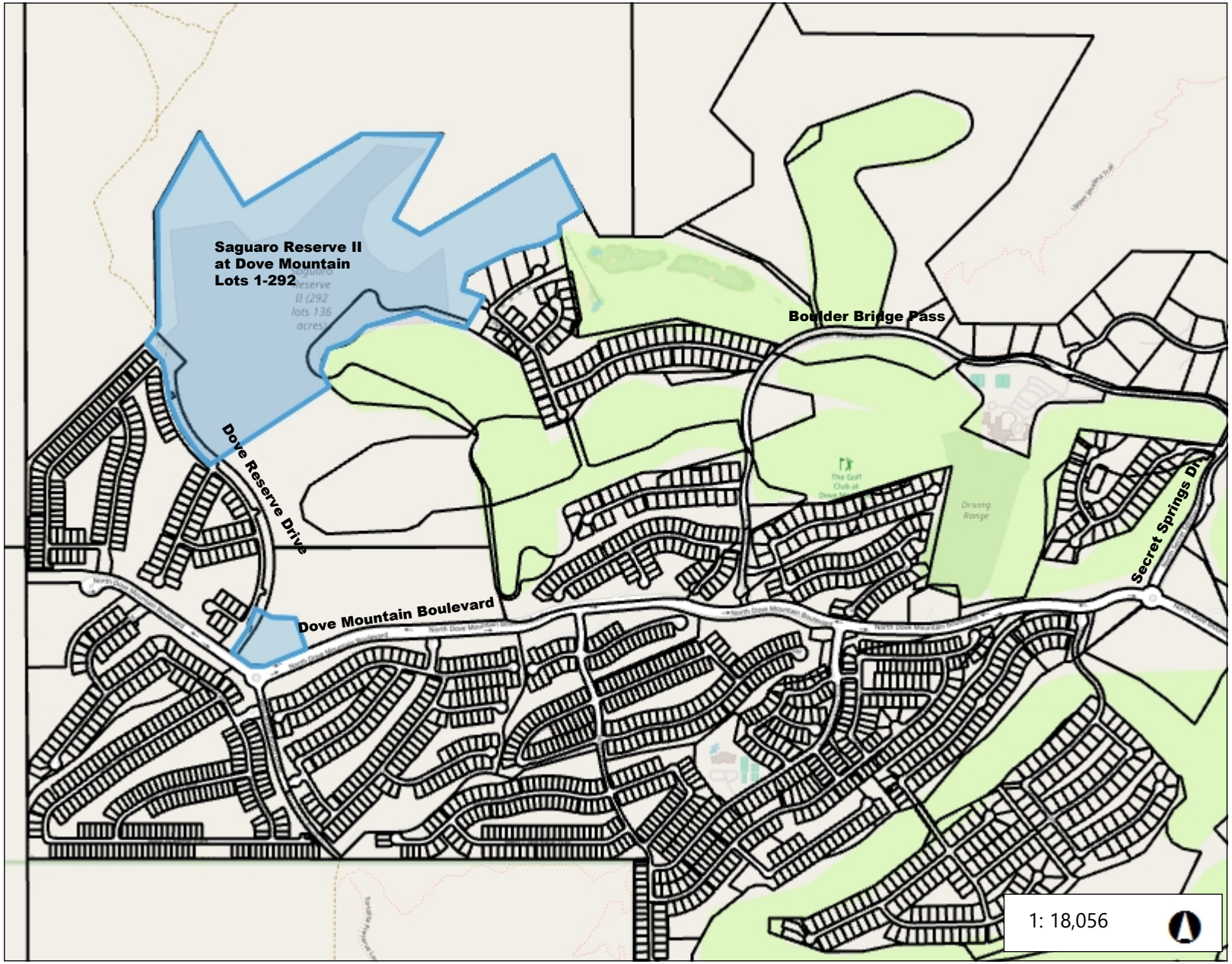
Baker & Associates Engineering, Inc.
3561 E. Sunrise Drive, Suite #225 Tucson, Arizona 85718 (520) 318-1950 Fax (520) 318-1930

#PRV2204-003 REF.: #PRV2109-005; PRV1803-002 JOB #2447.2 DATE: 6/30/2022 SHEET 18 OF 18

SEQUENCE #

Town of Marana Planning

Final Plat for Saguaro Reserve II at Dove Mountain 1-292 (PRV2204-003)





Legend

- Marana Town Limits
- Parcel Labels
- Parcels (Black)

Notes

0.6 0 0.28 0.6 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

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This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

MARANA AZ

Development Services / maranaplanning@maranaAZ.gov
11555 West Civic Center Drive / Marana, AZ 85653
Ph (520) 382-2600 / Fax (520) 382-2641 / maranaAZ.gov

PROJECT APPLICATION

APPLICATION TYPE

☐ Annexation	☐ Development Plan	☐ Development Plan Package	☐ General Plan Amendment
☐ Rezone	☐ Minor Land Division	☐ Significant Land Use Change	☐ Conditional Use Permit
☐ Specific Plan	☐ Landscape Plan	☐ Native Plant Plan/Exception	☐ SWPP
☐ Variance	☐ Hydraulic Model	☐ Sewer Capacity Assurance	☐ Sign Program
☒ Plat	☐ Improvement Plan	☐ Report (Type): _____	☐ Other: _____

PROJECT INFORMATION

Project Name: Saguaro Reserve II			
Description of Project: Single Family Residential			Number of Lots: 288
Parcel No.(s): 218-19-183H, Portion of 218-22-002R & 218-31-183E			Gross Area (Acres): 136.9
Project Address: Not available			
Ref. Project No.: PRV2102-004; PRV1803-002			

CONTACT INFORMATION

Owner: DM Phase IV Investment	Contact Name: Bill Hallinan		
Address: 3567 E. Sunrise Drive, #219	City: Tucson	State: AZ	Zip: 85718
Email: bhallinan@cottonwoodpropertie$ com	Phone No.: (520) 299-8424		
Applicant: See Above	Contact Name:		
Address:	City:	State:	Zip:
Email:	Phone No.:		
Consultant/Engineer: Baker & Assoc. Engineering	Contact Name: Marty Magelli		
Address: 3561 E. Sunrise Dr., #225	City: Tucson	State: AZ	Zip: 85718
Email: marty@baetucson.com	Phone No.: (520) 318-1950		

OWNER/APPLICANT AUTHORIZATION

I hereby certify that the information set forth in this application are true and correct to the best of my knowledge and that I am either the owner of the property or that I have been authorized in writing by the owner to file this application. (If applicant is not the owner, attach written authorization from the owner.)

William Hallinan	W. Hallinan	7-15-21
Applicant Name (PRINT)	Signature	Date

FOR OFFICIAL USE ONLY

Project No._____ **Date Received**_____

Revision Date 03/29/2019

Council-Regular Meeting **C2**

Meeting Date: 08/03/2022

To: Mayor and Council

From: Brian Varney, Senior Planner

Date: August 3, 2022

Strategic Plan Focus Area:
Not Applicable

Subject: Resolution No. 2022-076: Relating to Development; approving a Final Plat for Little Lambert, Lots 1-5 and Common Area "A" (Private Street) located north of Lambert Lane and approximately one-half mile west of Camino de Oeste within Section 12, Township 12 South and Range 12 East (Brian D. Varney)

Discussion:

Request
JAS Engineering is requesting approval of a final plat for five residential lots and Common Area "A" (Private Street) on approximately 9.94 acres.

Location
The proposed subdivision is located north of Lambert Lane and approximately one-half mile west of Camino de Oeste.

Zoning
The zoning of the property is R-80 (Residential) which requires a minimum lot size of 80,000 square feet for single-family residential development.

Land Use
The final plat proposes five single-family residential lots on 9.94 acres of land yielding a density of .50 residences per acre. The minimum lot size proposed with this plat is 80,000 square feet, the maximum is 94,826 square feet, and the average is 83,066 square feet. Common Area 'A' (the private street) occupies 17,704 square feet or .41 acres. The maximum allowable building height is 30 feet. Rezoning Ordinance No. 2006.06 and

the associated amending Ordinance No. 2009.28 mandated a number of development standards including an overall site disturbance of 40 percent. Additionally, a native plant permit is required for each lot at the time of application for a building permit.

Access and Traffic Circulation
Access to the lots within the subdivision will be provided by a private street maintained by a homeowner's association. The private street is accessed by an existing 30-foot ingress/ egress/ utility easement extending north from Lambert Lane.

Infrastructure and Utilities
Water will be provided to the subdivision by Tucson Water. Wastewater service will be provided by private on-site septic systems.

Staff Recommendation:

Staff has reviewed the proposed Final Plat against the requirements of Marana Ordinance No. 2002.15, Ordinance No. 2006.06, and Ordinance No. 2009.28, as well as the Marana Town Code and the Marana General Plan. The final plat is in substantial conformance with all required development regulations, and staff recommends approval.

Suggested Motion:

I move to adopt Resolution No. 2022-076, approving the Final Plat for Little Lambert, Lots 1-5 and Common Area "A" (Private Street).

Attachments

Resolution No. 2022-076 Little Lambert Final Plat
Little Lambert Final Plat
PRV2203-001 Little Lambert_Map
PRV2203-001 Little Lambert_App

MARANA RESOLUTION NO. 2022-076

RELATING TO DEVELOPMENT; APPROVING A FINAL PLAT FOR LITTLE LAMBERT, LOTS 1-5 AND COMMON AREA "A" (PRIVATE STREET) LOCATED NORTH OF LAMBERT LANE AND APPROXIMATELY ONE-HALF MILE WEST OF CAMINO DE OESTE WITHIN SECTION 12, TOWNSHIP 12 SOUTH AND RANGE 12 EAST

WHEREAS, on September 3, 2002, the Mayor and Town Council adopted Ordinance No. 2002.15, approving a rezoning of approximately 40 acres of land within Section 12, Township 12 South, Range 12 East from Zone C (Large Lot Zone) to R-144 (Residential); and

WHEREAS, on March 21, 2006, the Mayor and Town Council adopted Ordinance No. 2006.06, approving a rezoning of approximately 20 acres of land within Section 12, Township 12 South, Range 12 East from R-144 (Residential) to R-80 (Residential) ; and

WHEREAS, on December 15, 2009, the Mayor and Town Council adopted Ordinance No. 2009.28, approving a modification of Condition No. 4 of Ordinance No. 2006.06 increasing the overall disturbance of the site from 30 percent to 40 percent; and

WHEREAS, JAS Engineering has applied for approval of the final plat for Little Lambert, Lots 1-5 and Common Area "A" (Private Street) located north of Lambert Lane and approximately one-half mile west of Camino de Oeste within Section 12, Township 12 South, and Range 12 East; and

WHEREAS the Mayor and Town Council, at its August 3, 2022 meeting, determined that the final plat for Little Lambert should be approved.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE TOWN OF MARANA, ARIZONA that the final plat for Little Lambert is hereby approved.

PASSED AND ADOPTED by the Mayor and Council of the Town of Marana, Arizona, this 3th day of August, 2022.

Mayor Ed Honea

ATTEST:

Cherry L. Lawson, Town Clerk

APPROVED AS TO FORM:

Jane Fairall, Town Attorney

FINAL PLAT FOR LITTLE LAMBERT

APPROVALS

BY: _____ P.E. _____
MARANA TOWN ENGINEER/ SUBDIVISION ENGINEER — DATE

BY: _____ _____
MARANA PLANNING MANAGER — DATE

I, _____, CLERK OF THE TOWN OF MARANA, HEREBY CERTIFY THAT THIS PLAT WAS APPROVED BY THE MAYOR AND COUNCIL OF THE TOWN OF MARANA ON THE_____ DAY OF _____, 2022.

_____ _____
CLERK OF THE TOWN OF MARANA — DATE

THE UNDERSIGNED CERTIFIES THAT IT IS DESIGNATED AS HAVING AN ASSURED WATER SUPPLY AND WILL PROVIDE WATER SERVICE TO THIS SUBDIVISION.

BY:_____ _____
DATE

ITS:_____ _____
CITY OF TUCSON WATER DEPARTMENT — DATE

ASSURANCES

ASSURANCES IN THE FORM OF A THIRD PARTY TRUST FROM STEWART TITLE AND TRUST OF TUCSON, AN ARIZONA CORPORATION, AS TRUSTEE, UNDER TRUST NO. 3776 AS RECORDED IN SEQUENCE NUMBER _____ IN THE OFFICE OF THE RECORDER OF PIMA COUNTY, ARIZONA HAVE BEEN PROVIDED TO GUARANTEE INSTALLATION OF REQUIRED STREET, SEWER, ELECTRIC, GAS AND WATER UTILITIES, DRAINAGE, FLOOD CONTROL AND OTHER SUBDIVISION IMPROVEMENTS MEETING ESTABLISHED MINIMUM STANDARDS OF DESIGN AND CONSTRUCTION.

BY _____ _____
TOWN OF MARANA — DATE

CERTIFICATION OF SURVEY

I HEREBY CERTIFY THAT THE BOUNDARY SURVEY SHOWN ON THIS PLAT WAS PERFORMED UNDER MY DIRECTION AND THAT ALL EXISTING AND/OR PROPOSED SURVEY MONUMENTS AND MARKERS SHOWN ARE CORRECTLY DESCRIBED. I FURTHER CERTIFY THAT THIS PLAT WAS PREPARED UNDER MY DIRECTION FOR PERIMETER BOUNDARY RESULTS ONLY.

TAYLOR WEBB
ARIZONA REGISTRATION NO. 52699

REGISTERED LAND SURVEYOR — CERTIFICATE NO. 52699 — TAYLOR J. WEBB — 7/15/22 — ARIZONA, U.S.A.

CERTIFICATION OF ENGINEERING

I HEREBY CERTIFY THAT THE 100-YEAR FLOOD PRONE LIMITS AND EROSION HAZARD SETBACKS WERE REVIEWED AND SHOWN UNDER MY SUPERVISION. I HEREBY CERTIFY THAT ALL INTERIOR SUBDIVISION GEOMETRY FOR THIS PLAT WAS REVIEWED AND SHOWN UNDER MY SUPERVISION

JEFFREY A. STANLEY, P.E.
ARIZONA REGISTRATION NO. 19263

REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. 19263 — JEFFREY A. STANLEY — 7-15-22 — ARIZONA, U.S.A.

Sheet Index

1 Cover Sheet
2 Lot Details

JAS ENGINEERING
3710 E. CALLE CORTEZ TUCSON, ARIZONA 85716
(520) 390-7920
STANLEY19263@MSN.COM

DEDICATION

WE, THE UNDERSIGNED, HEREBY WARRANT THAT WE ARE ALL AND THE ONLY PARTIES HAVING ANY FEE TITLE INTEREST IN THE LAND SHOWN ON THIS PLAT, AND WE CONSENT TO THE SUBDIVISION OF THIS LAND IN THE MANNER SHOWN ON THIS PLAT.

WE HEREBY DEDICATE TO THE TOWN OF MARANA ALL PUBLIC EASEMENTS SHOWN ON THIS PLAT. UTILITY EASEMENTS AS SHOWN ON THIS PLAT, ARE DEDICATED TO THE TOWN OF MARANA, PIMA COUNTY, AND ALL PUBLIC AND PRIVATE UTILITY COMPANIES FOR THE PURPOSE OF INSTALLATION AND MAINTENANCE OF, AND ACCESS TO, PUBLIC AND PRIVATE UTILITIES AND PUBLIC SEWERS. OTHER EASEMENTS SHOWN ON THIS PLAT ARE DEDICATED TO THE TOWN OF MARANA FOR THE PURPOSE OR PURPOSES NOTED ON THIS PLAT.

WE, THE UNDERSIGNED, OUR SUCCESSORS AND ASSIGNS, DO HEREBY HOLD THE TOWN OF MARANA, ITS EMPLOYEES, OFFICERS, AND AGENTS HARMLESS FROM AND AGAINST ANY AND ALL CLAIMS FOR DAMAGES RELATED TO THE USE OF THESE LANDS NOW AND IN THE FUTURE BY REASON OF FLOODING, FLOWAGE, EROSION, OR DAMAGE CAUSED BY WATER, WHETHER SURFACE, FLOOD, OR RAINFALL. NATURAL DRAINAGE SHALL NOT BE ALTERED, DISTURBED, OR OBSTRUCTED WITHOUT THE APPROVAL OF THE TOWN OF MARANA.

COMMON AREA AS SHOWN ON THIS PLAT IS RESERVED FOR THE PRIVATE USE AND CONVENIENCE OF ALL OWNERS OF PROPERTY WITHIN THIS SUBDIVISION AND THEIR GUESTS AND INVITEES. COMMON AREA IS GRANTED AS EASEMENTS TO THE TOWN OF MARANA AND ALL PUBLIC AND PRIVATE UTILITY COMPANIES FOR THE PURPOSE OF INSTALLATION AND MAINTENANCE OF, AND ACCESS TO, UNDERGROUND PUBLIC AND PRIVATE UTILITIES. TITLE TO ALL COMMON AREA SHALL BE VESTED IN AN ASSOCIATION OF INDIVIDUAL LOT OWNERS AS ESTABLISHED BY COVENANTS, CONDITIONS AND RESTRICTIONS RECORDED IN SEQUENCE NUMBER _____ IN THE OFFICE OF THE RECORDER OF PIMA COUNTY, ARIZONA. EACH AND EVERY LOT OWNER WITHIN THE SUBDIVISION SHALL BE A MEMBER OF THE ASSOCIATION, WHICH IS RESPONSIBLE FOR THE CONTROL, MAINTENANCE, SAFETY, AND LIABILITY OF THE COMMON AREA WITHIN THIS SUBDIVISION.

STEWART TITLE AND TRUST OF TUCSON, AN ARIZONA CORPORATION, AS TRUSTEE, UNDER TRUST NO. 3776, AND NOT IN ITS CORPORATE CAPACITY

BY: _____ 7/15/22
DATE

ACKNOWLEDGMENT

STATE OF ARIZONA)
S.S.)
COUNTY OF PIMA)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME THIS 15 DAY OF July, 2022 BY Jessica Hullum TRUST OFFICER OF STEWART TITLE AND TRUST OF TUCSON, AN ARIZONA CORPORATION, AS TRUSTEE UNDER TRUST NO. 3776, ON BEHALF OF THE TRUST.

MY COMMISSION EXPIRES: Feb. 7, 2023

JENNY ROSA — Notary Public - Arizona — Pima County — Commission # 566216 — My Commission Expires February 07, 2023

BENEFICIARY OF TRUST NO. 3776
JESSICA HULLUM
10525 NORTH CALLE PRESIDIO DE OESTE
MARANA, ARIZONA 85742

RECORDING

STATE OF ARIZONA) FEE _____
S.S.)
COUNTY OF PIMA) NO. _____

THIS INSTRUMENT WAS FILED FOR RECORD AT THE REQUEST OF JAS ENGINEERING ON THIS _____ DAY OF _____, 2022, AT _____.M., AT SEQUENCE No._____

_____
GABRIELLA CAZARES-KELLY — DATE
PIMA COUNTY RECORDER

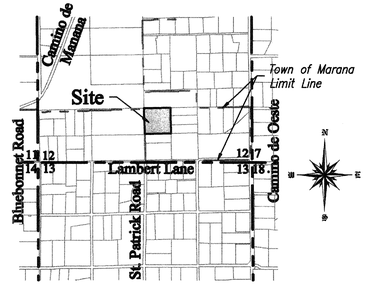
Disturbance Matrix

DISTURBANCE ZONE	AREA
30' ACCESS EASEMENT (DKT 4448 PG 536) **	19,808 S.F.
TRICO AND WATER EASEMENTS	7,554 S.F.
COMMON AREA 'A'	17,704 S.F.
LOTS 1 - 5	147,960 S.F.
TOTAL DISTURBANCE	173,218* S.F.

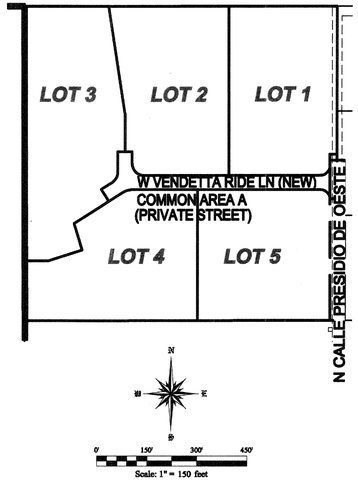
** SEE GENERAL NOTE 23 FOR ALLOWABLE DISTURBANCE. TOTAL DISTURBANCE= 40%*
*** SEE GENERAL NOTE 33.*

GENERAL NOTES:

1. THE GROSS AREA OF THE SUBDIVISION IS 9.94 ACRES OR 433,046 S.F.
2. TOTAL NUMBER OF LOTS IS 5.
3. ALL LOTS REQUIRE A FLOODPLAIN USE PERMIT AND A T-1 GRADING PERMIT.
4. TOTAL MILES OF NEW PUBLIC STREETS IS 0.0 MILES.
5. MINIMUM ALLOWABLE LOT SIZE PER ZONING DESIGNATION IS 80,000 S.F.
6. MINIMUM LOT SIZE PROVIDED IS : 80,000 S.F.
   AVERAGE LOT SIZE PROVIDED IS: 83,066 S.F.
   MAXIMUM LOT SIZE PROVIDED IS: 94,826 S.F.
7. MAXIMUM ALLOWABLE BUILDING HEIGHT IS 30 FEET/2 STORIES
8. BUILDING SETBACKS:
   a. FRONT: 30 FEET
   b. SIDE: 30 FEET.
   c. REAR: 40 FEET.
   d. 40 FEET FROM ARTERIAL OR COLLECTOR STREET.
9. THE EXISTING ZONING IS R-80 AS ESTABLISHED BY TOWN OF MARANA ORDINANCES NO. 2002.15, 2006.06 AND 2009.28. GROSS DENSITY IS 0.50 RAC.
10. THIS PLAT IS IN COMPLIANCE WITH MARANA ORDINANCE NO. 2006.06 AND MARANA ORDINANCE NO. 2009.28
11. THE AREA BETWEEN 100-YEAR FLOOD LIMITS REPRESENT AN AREA THAT MAY BE SUBJECT TO FLOODING FROM A 100-YEAR FREQUENCY FLOOD AND ALL LAND IN THIS AREA WILL BE RESTRICTED TO USES THAT ARE COMPATIBLE WITH FLOODPLAIN MANAGEMENT AS APPROVED BY THE FLOODPLAIN ADMINISTRATOR.
12. BUILDABLE AREAS FOR LOTS 1 THROUGH 5 WILL BE FILLED TO INDICATE THAT ALL BUILDING FINISHED FLOOR ELEVATIONS ARE TO BE ELEVATED TO TWO FEET ABOVE ADJACENT GRADES. FINISHED FLOOR ELEVATIONS MUST BE VERIFIED BY A REGISTERED PROFESSIONAL LAND SURVEYOR.
13. NO FURTHER LOT SPLITTING SHALL BE DONE WITHOUT THE WRITTEN APPROVAL OF THE TOWN OF MARANA.
14. BASIS OF BEARING: NORTH 00°05'32" WEST, ACCORDING TO RECORD OF SURVEY BOOK 39, PAGE 54, BETWEEN MONUMENTS FOUND ON THE WEST LINE OF THE SOUTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 12, TOWNSHIP 12 SOUTH, RANGE 12 EAST, GILA AND SALT RIVER MERIDIAN, PIMA COUNTY, ARIZONA
15. BASIS OF ELEVATION: 2455.03' NAVD88 PIMA COUNTY OPUS CONTROL POINT J01. 1/2" REBAR TAGGED "PCDOT GPS" NEAR THE INTERSECTION OF LAMBERT LN AND CAMINO DE OESTE.
16. ALL LOTS WILL BE SERVED BY INDIVIDUAL SEPTIC SYSTEMS.
17. THE PROFESSIONAL ENGINEER OF RECORD SHALL CERTIFY AS TO THE FORM, LINE AND FUNCTION OF ALL PUBLIC AND PRIVATE ROADWAYS AND DRAINAGE STRUCTURES BEFORE RELEASE OF ASSURANCES.
18. OVERALL DISTURBANCE TO THE SITE INCLUDING COMMON AREA "A" (PRIVATE STREETS), SEPTIC TANKS, LEACH FIELDS, EASEMENTS, UTILITIES, AND BUILDING ENVELOPES IS NOT TO EXCEED A COMBINED TOTAL OF 40 PERCENT PER MARANA ORDINANCE NO. 2009.28
19. THIS SUBDIVISION IS LOCATED WITHIN THE CITY OF TUCSON WATER SERVICE AREA, WHICH HAS BEEN DESIGNATED AS HAVING AN ASSURED WATER SUPPLY UNDER A.R.S. 45-476.
20. ALL NEW AND EXISTING UTILITIES, WITHIN OR CONTIGUOUS TO THIS SITE SHALL BE PLACED UNDERGROUND EXCEPT ELECTRICAL TRANSMISSION LINES CARRYING 48KV OR GREATER, AND THOSE LINES WHICH CAN BE SHOWN TO EXIST IN CURRENT OR FUTURE ELECTRICAL TRANSMISSION CORRIDORS.
21. THIS PROPERTY FALLS WITHIN FEMA ZONE AO (DEPTH 1', VEL 3 FPS) ACCORDING TO FLOOD INSURANCE RATE MAP (FIRM) PANEL 04019C1065L, DATED JUNE 16, 2011.
22. NO CONSTRUCTION WILL TAKE PLACE WITHIN ON SITE WASHES.
23. THE AREA OF DISTURBANCE INCLUDES PUBLIC AND PRIVATE UTILITY EASEMENTS, COMMON AREA 'A', AND GRADING AREA FOR EACH LOT 1-5. MAXIMUM ALLOWABLE DISTURBANCE IS 40% OF SITE. AREA = (433,046 SF GROSS AREA x 0.40 = 173,218 SF MAXIMUM DISTURBANCE) SEE DISTURBANCE MATRIX ON THIS SHEET.
24. WALLS OR FENCES ARE RESTRICTED TO THE BUILDING ENVELOPES ESTABLISHED IN THE GRADING PERMIT PROCESS.
25. TEMPORARY FENCING IS REQUIRED AROUND DISTURBANCE AREAS PRIOR TO GRADING AND SHALL BE MAINTAINED UNTIL ALL CONSTRUCTION ACTIVITY IS COMPLETED. ALL NON-DISTURBED AND RE-VEGETATED AREAS ON LOTS SHALL BE DESIGNATED NATURAL OPEN SPACE PER THIS PLAT.
26. FIRE HYDRANTS SHALL PROVIDE 1,000 GPM FOR 1 HOUR. ANY NEW DWELLING OVER 600 FEET FROM A FIRE HYDRANT WILL REQUIRE ADDITIONAL FIRE FLOW (ADD A HYDRANT) OR A FIRE SPRINKLER SYSTEM. ANY NEW DWELLING OVER 3,600 SF WILL REQUIRE 1,750 GPM FIRE FLOW (TWO HYDRANTS) WITHIN 600 FEET OR A FIRE SPRINKLER SYSTEM. ANY DWELLING OVER 4,800 SF WILL REQUIRE 2,000 GPM FIRE FLOW (TWO OR MORE HYDRANTS) WITHIN 600 FEET DEPENDING ON FLOW TEST RESULTS OR A FIRE SPRINKLER SYSTEM.
27. ALL LOTS WILL REQUIRE A FLOOD PLAIN USE PERMIT. ALL LOTS WILL REQUIRE AN ELEVATION CERTIFICATE PER THE CONDITION AND RESTRICTION OF A TOWN OF MARANA FLOOD PLAIN USE PERMIT. FUTURE HOMES SHALL BE PLACED ON ARMORED FILL PADS WITH TOE DOWNS PER THE APPROVED DRAINAGE REPORT. FINISHED FLOOR ELEVATIONS MUST BE A MINIMUM OF 2 FEET ABOVE HIGHEST ADJACENT GRADE.
28. A MINIMUM OF TWO ON-SITE, OFF-STREET PARKING SPACES ARE REQUIRED PER LOT.
29. ALL CONSTRUCTION AND DISTURBANCE ON LOTS IS RESTRICTED TO BUILDING ENVELOPES AND EASEMENTS. ALL WALLS, DRIVEWAYS, LANDSCAPING, SEPTIC SYSTEMS/LEECH FIELDS, UTILITY LINES AND STRUCTURES ON LOTS ARE RESTRICTED TO THE BUILDING/GRADING ENVELOPES.
30. ALL LAND ON LOTS, OUTSIDE THE BUILDING ENVELOPES AND NOT IN EASEMENTS, WILL BE MAINTAINED IN PERPETUITY AS NATURAL UNDISTURBED OPEN SPACE (NUOS).
31. THE MAXIMUM DISTURBANCE (BUILDING/GRADING ENVELOPE) SQUARE FOOTAGE FOR EACH LOT MAY NOT BE CHANGED; HOWEVER, THE MAXIMUM DISTURBANCE (BUILDING/GRADING) ENVELOPE BOUNDARIES FOR EACH LOT MAY BE MODIFIED BY LOT OWNER ON AN ADMINISTRATIVE BASIS BY THE TOWN OF MARANA AS PART OF THE TYPE 1 GRADING PROCESS. ALL ADMINISTRATIVE CHANGES MUST BE APPROVED BY THE PLANNING DIRECTOR AND TOWN ENGINEER PRIOR TO ISSUANCE OF TYPE 1 GRADING PERMIT FOR SAID LOT. A REVISED LEGAL DESCRIPTION REFLECTING THE REVISED DISTURBANCE (BUILDING/GRADING) ENVELOPE BOUNDARIES MUST BE RECEIVED PRIOR TO ISSUANCE OF THE GRADING PERMIT FOR SAID LOT, AND RECORDED PRIOR TO FINAL BUILDING INSPECTION.
32. GRADED AREA WITHIN LOT 3 AND 4 THAT IS COVERED BY DKT 4448 PG 536 (30' ESMT) IS ALLOWED AND DOES NOT COUNT TOWARD LISTED 33,266 SF FOR LOTS 3 AND THE 27,720 SF FOR LOT 4.
33. APPROVAL OF THIS PLAT DOES NOT AFFIRM, CERTIFY, OR APPROVE ANY LAND DIVISION THAT MAY BE CONTRARY TO STATE LAW, NOR DOES IT CERTIFY THE EXISTENCE OF, OR COMPLIANCE WITH, ANY DEED RESTRICTIONS OR EASEMENTS.
34. OBJECTS AND MATERIALS WITHIN SIGHT VISIBILITY TRIANGLES SHALL BE PLACED SO AS NOT TO INTERFERE WITH A VISIBILITY PLANE DESCRIBED BY TWO HORIZONTAL LINES LOCATED 30" AND 72" ABOVE FINISHED GRADE OF THE ROADWAY SURFACE, AND SHALL CONFORM TO THE TOWN OF MARANA SUBDIVISION STREET STANDARDS.
35. INSTALLATION OF ITEMS SUCH AS LANDSCAPING, IRRIGATION, SIGNAGE, MONUMENTS, WALLS AND DRAINAGE IMPROVEMENTS IN THE PUBLIC RIGHTS-OF-WAY SHALL REQUIRE A PERPETUAL LICENSE AGREEMENT FOR INSTALLATION, MAINTENANCE AND INDEMNIFICATION. THIS DOCUMENT SHALL BE EXECUTED PRIOR TO FINAL APPROVAL OF LANDSCAPE PLANS OR IMPROVEMENT PLANS ALLOWING INSTALLATION WITHIN THE PUBLIC RIGHTS-OF-WAY.
36. IN ACCORDANCE WITH MARANA ORDINANCE NO. 2006.06, A NATIVE PLANT PERMIT MUST BE OBTAINED WITH EACH HOUSE PERMIT AND ANY OTHER SITE DISTURBANCE/UTILITY WORK THAT WILL IMPACT THE SITE. THE PLANT INVENTORY METHODOLOGY MUST BE USED WHEN SUBMITTING FOR THE NATIVE PLANT PERMIT.



Location Map
Section 12, Township 12 South, Range 12 East, Gila and Salt River Meridian, Town of Marana, Pima County, Arizona
Scale: 3" = 1 mile



LEGEND

- ⚠ A 2" BRASS DISC SURVEY MONUMENT, CONCRETE STAMPED TO BE SET BY A REGISTERED LAND SURVEYOR, RLS 52699.
- ◎ FOUND MONUMENT AS DESCRIBED
- ◉ SET ½" IRON PIN, TAGGED "RLS #52699"
- ◘ FOUND CONTROL MONUMENT AS NOTED
- 1 LOT NUMBER
- ★ LOT ACCESS
- NAE NO ACCESS EASEMENT
- UTILITY AND ACCESS EASEMENT
- PROPERTY LINES
- RIGHT-OF-WAY LINE
- SUBDIVISION BOUNDARY
- TOWN OF MARANA BOUNDARY
- SETBACKS
- CENTERLINE
- SITE VISIBILITY EASEMENT
- WASH LIMITS

ADMINISTRATIVE ADDRESS

10525 N CAMINO PRESIDIO DE OESTE
TUCSON, ARIZONA 85742

FINAL PLAT FOR LITTLE LAMBERT

LOTS 1 - 5 AND COMMON AREA A (PRIVATE STREET)

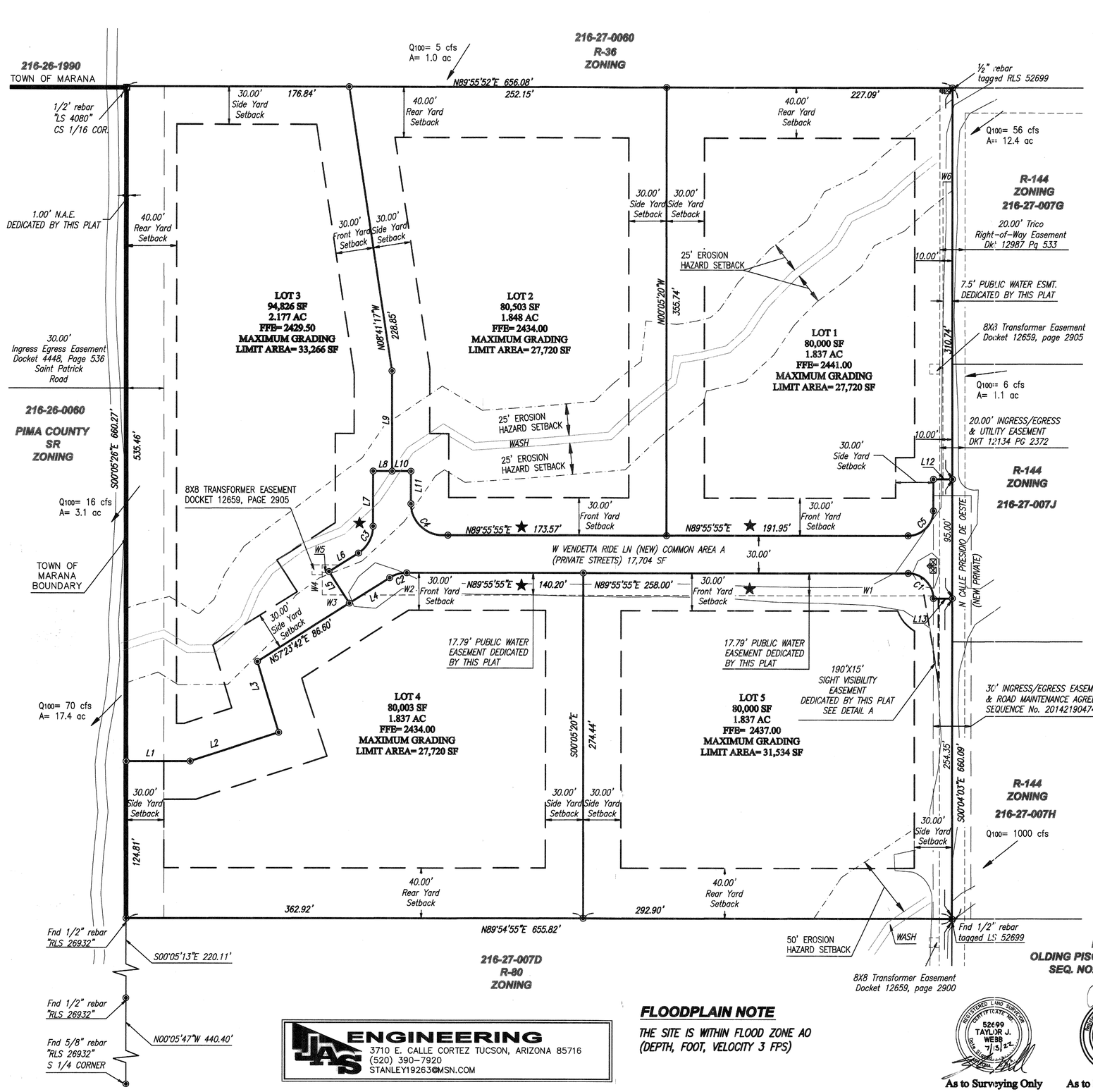
BEING A PORTION OF SECTION 12, TOWNSHIP 12 SOUTH, RANGE 12 EAST, GILA AND SALT RIVER MERIDIAN, TOWN OF MARANA, PIMA COUNTY, ARIZONA

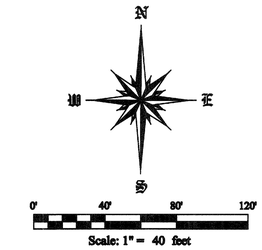
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PCZ-02061
PCM-09054
PCZ-05102

Sheet 1 of 2

SEQUENCE No. _____

SEQUENCE No. _____





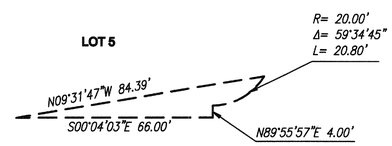
LEGEND

◬	A 2" BRASS DISC SURVEY MONUMENT, CONCRETE STAMPED TO BE SET BY A REGISTERED LAND SURVEYOR, RLS 52699.
◎	FOUND MONUMENT AS DESCRIBED
◉	SET ½" IRON PIN, TAGGED "RLS #52699"
◘	FOUND CONTROL MONUMENT AS NOTED
1	LOT NUMBER
★	LOT ACCESS
NAE	NO ACCESS EASEMENT
- - - - -	UTILITY AND ACCESS EASEMENT
———	PROPERTY LINES
———	RIGHT-OF-WAY LINE
———	SUBDIVISION BOUNDARY
———	TOWN OF MARANA BOUNDARY
— — —	SETBACKS
—·—	CENTERLINE
	SITE VISIBILITY EASEMENT
~~	WASH LIMITS

PARCEL LINE DATA		
SEGMENT	LENGTH	DIRECTION
L1	50.94'	S89°54'34"W
L2	74.39'	S71°47'26"W
L3	58.29'	N16°56'54"W
L4	37.99'	N57°23'42"E
L5	30.00'	S32°36'18"E
L6	27.73'	N57°23'42"E
L7	43.62'	N00°05'20"W
L8	15.00'	N89°54'40"E
L9	78.91'	N00°05'20"W
L10	15.00'	N89°54'40"E
L11	25.57'	N00°05'20"W
L12	15.00'	N89°55'55"E
L13	15.00'	N89°55'57"E

PARCEL CURVE DATA			
SEGMENT	LENGTH	RADIUS	DELTA
C1	31.42'	20.00'	90° 00' 02"
C2	14.20'	25.00'	32° 32' 14"
C3	25.08'	25.00'	57° 29' 02"
C4	39.26'	25.00'	89° 58' 47"
C5	31.42'	20.00'	89° 59' 58"

PUBLIC WATER EASEMENT DATA		
SEGMENT	LENGTH	DIRECTION
W1	277.88'	S89°55'55"W
W2	175.38'	S89°55'55"W
W3	17.36'	S89°55'55"W
W4	17.79'	N00°04'05"W
W5	6.01'	S89°55'55"W



DETAIL "A" SIGHT VISIBILITY EASEMENT

FLOODPLAIN NOTE

THE SITE IS WITHIN FLOOD ZONE AO (DEPTH, FOOT, VELOCITY 3 FPS)

JAS ENGINEERING
3710 E. CALLE CORTEZ TUCSON, ARIZONA 85716
(520) 390-7920
STANLEY19263@MSN.COM

REGISTERED LAND SURVEYOR — CERTIFICATE NO. 52699 — TAYLOR J. WEBB — 7/15/22 — ARIZONA U.S.A.

As to Surveying Only

REGISTERED PROFESSIONAL ENGINEER — CERTIFICATE NO. 19263 — JEFFREY A. STANLEY — 7/15/22 — ARIZONA U.S.A.

As to Engineering Only

FINAL PLAT FOR LITTLE LAMBERT

LOTS 1 - 5 AND COMMON AREA A (PRIVATE STREET)

BEING A PORTION OF SECTION 12, TOWNSHIP 12 SOUTH, RANGE 12 EAST, GILA AND SALT RIVER MERIDIAN, TOWN OF MARANA, PIMA COUNTY, ARIZONA

PRV2203-001
PCZ-02061
PCM-09054
PCZ-05102

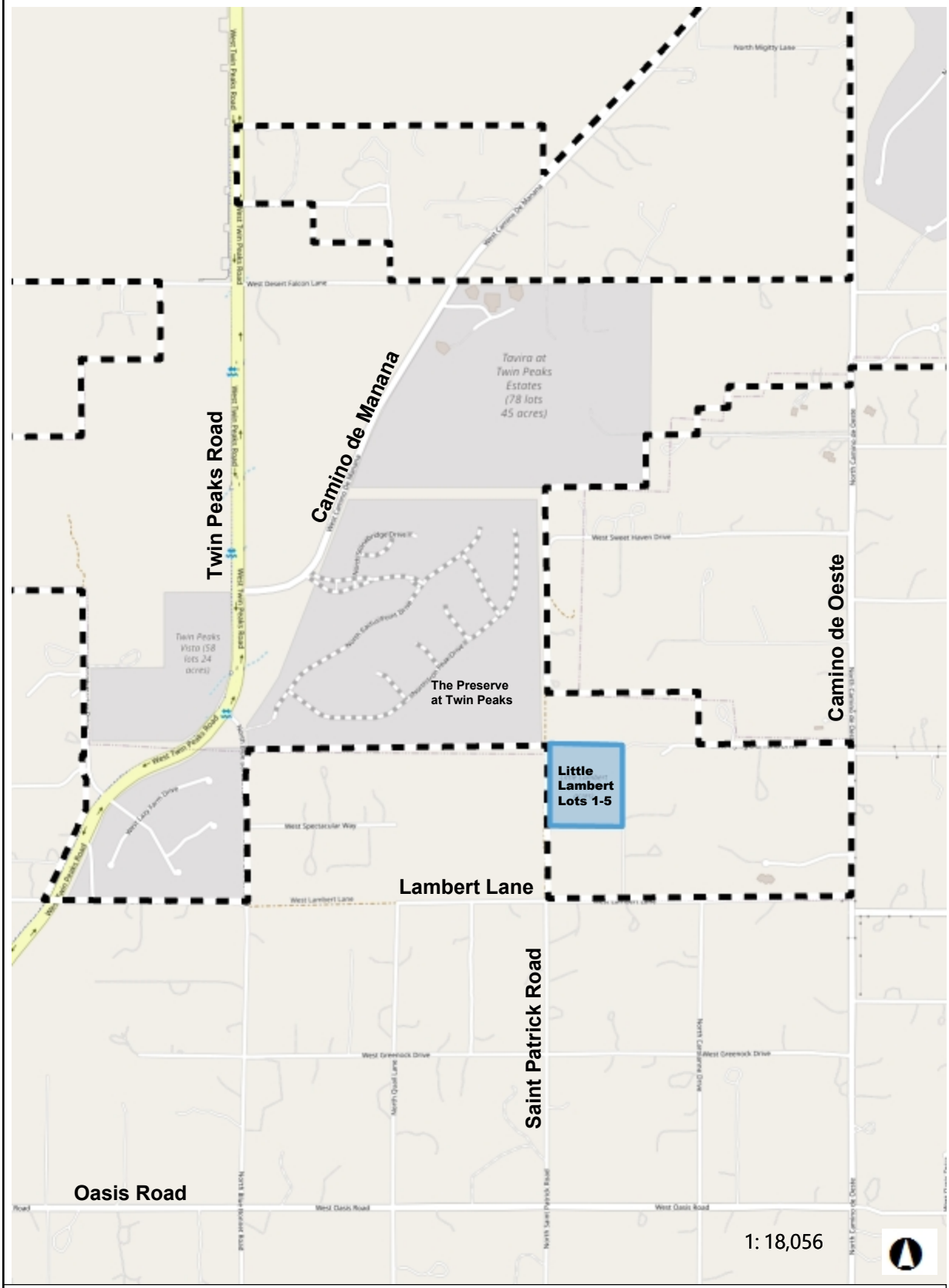
Scale: 1" = 40'

Sheet 2 of 2

SEQUENCE No. _____

Town of Marana Planning

Final Plat for Little Lambert, Lots 1-5 (PRV2203-001)





Legend

- Marana Town Limits
- Parcel Labels

Notes

0.6 0 0.28 0.6 Miles

WGS_1984_Web_Mercator_Auxiliary_Sphere

© Latitude Geographics Group Ltd.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

MARANA AZ

Development Services / maranaplanning@maranaAZ.gov
11555 West Civic Center Drive / Marana, AZ 85653
Ph (520) 382-2600 / Fax (520) 382-2641 / maranaAZ.gov

PROJECT APPLICATION

APPLICATION TYPE

☐ Annexation	☐ Development Plan	☐ Development Plan Package	☐ General Plan Amendment
☐ Rezone	☑ Minor Land Division	☐ Significant Land Use Change	☐ Conditional Use Permit
☐ Specific Plan	☐ Landscape Plan	☐ Native Plant Plan/Exception	☐ SWPP
☐ Variance	☐ Hydraulic Model	☐ Sewer Capacity Assurance	☐ Sign Program
☐ Plat	☐ Improvement Plan	☐ Report (Type): _____	☐ Other: _____

PROJECT INFORMATION

Project Name:	LITTLE LAMBERT, LOTS 1-5 AND COMMON AREA A (PRIVATE STREET)		
Description of Project:	5 LOT RESIDENTIAL SUBDIVISION	Number of Lots:	5
Parcel No.(s):	1-5	Gross Area (Acres):	9.94
Project Address:	10525 N. CALLE PRESIDIO DE OESTE		
Ref. Project No.:	PRV2202-001		

CONTACT INFORMATION

Owner: JESSICA HULLUM	Contact Name:	TYREL HULLUM	
Address: 10525 N. CALLE PRESIDIO DE OESTE	City: MARANA	State: AZ	Zip: 85742
Email: tyrel/hullum@gmail.com	Phone No.:	520-247-8557	
Applicant: JEFFREY A STANLEY	Contact Name:	JEFFREY STANLEY	
Address: 3710 E. CALLE CONTEZ	City: TUCSON	State: AZ	Zip: 85716
Email: stanley19263@msn.com	Phone No.:	(520) 390-7920	
Consultant/Engineer: SAME AS APPLICANT	Contact Name:		
Address:	City:	State:	Zip:
Email:	Phone No.:		

OWNER/APPLICANT AUTHORIZATION

I hereby certify that the information set forth in this application are true and correct to the best of my knowledge and that I am either the owner of the property or that I have been authorized in writing by the owner to file this application. (If applicant is not the owner, attach written authorization from the owner.)

JEFFREY A STANLEY		7-22-22
Applicant Name (PRINT)	Signature	Date

FOR OFFICIAL USE ONLY
Revision Date 03/29/2019

Project No._____ **Date Received**_____

Council-Regular Meeting **C3**

Meeting Date: 08/03/2022

To: Mayor and Council

Submitted For: Fausto Burruel, Public Works Deputy Director

From: Dan Grossman, CIP Process Analyst

Date: August 3, 2022

Strategic Plan Focus Area:
Commerce, Not Applicable

Strategic Plan Focus Area Additional Info:
PRINCIPLE STATEMENT 2: WE WILL SEEK AND RETAIN DIVERSE INDUSTRIES AND COMMERCE.
Initiative 3: Invest in airport infrastructure and lease opportunities to grow airport operations.

Subject: Relating to Procurement; ratifying the Town Manager's approval of change orders to the Airport MIRL, PAPI, & Beacon Replacement (AP026) project in the amount of $178,000.49; authorizing the transfer of appropriations, if necessary, for the change orders; and authorizing the Town Manager or designee to execute the necessary documents to effectuate the change orders (Fausto Burruel)

Discussion:

Marana Town Code Section 3-4-7(B)(3) provides that Town Council approval is necessary for change orders that individually or cumulatively exceed $100,000. However, Section 3-4-8(B) provides that the town manager or designee may approve change orders to public improvements contracts that exceed the authority otherwise granted by this section if the town manager reasonably determines that doing so will avoid unnecessary contractor delay claims or costs or public health or safety hazards that would otherwise occur while awaiting town council approval, provided that town council ratification occurs as soon as practicable thereafter.

The budget for fiscal year 2022- 2023 was adopted on June 21, 2022. The Airport MIRL, PAPI, & Beacon Replacement project (AP026) was properly included within the Town of Marana's FY2023 Capital Improvement Plan.

The final, revised budget amount for the Airport MIRL, PAPI, & Beacon Replacement is $1,635,285.

Effective 12/02/2021, the Town and Pavex Corp entered into a Construction Contract in the amount of $715,705.00 to construct the Airport MIRL, PAPI, & Beacon Replacement project (AP026). This construction contract has had no previous change orders.

Change order 1A to the Pavex Construction contract is necessary for the Medium Runway Intensity Lights (MIRL). Due to heavy monsoon storm damage that occurred after design investigations were performed there is a need to install new collars and lids to handholds, and additional lighting work to clean out and replace damaged handholds and covers. The cost of these additional improvements is $46,020.00.

Change order 1B to the Pavex Construction contract is necessary for the Precision Approach Path Indicators (PAPI). PAPI 12-30 requires two control switches which were not included in the original lighting control panel. PAPI 12 is revised to a 480V circuit with new transformer/disconnect and conductor quantity adjustments. The cost of these changes is a reduction of $6,017.00.

Change order 1C to the Pavex Construction contract is necessary for the Airport Beacon. A 120V circuit breaker is required due to the LED Beacon equipment requirements. The cost of this improvement is $200.00.

Change Order 2 to the Pavex Construction contract is necessary for the Medium Runway Intensity Lights (MIRL). During the on-site investigations of the project site it was determined that 5 existing handholes (pull boxes) identified for collar and lid replacement were damaged beyond repair and 14 additional handholes were identified for replacement that were damaged and not rated for traffic. A total of 19 handholes are required to be replaced in order to properly rehabilitate the runway lighting systems. The cost of these additional improvements is $101,655.93.

The combined amount of these change orders is $141,858.93, which will bring the Pavex Construction Contract to $857,563.93.

Effective 10/04/2021, The Town of Marana and Dibble & Associates Consulting Engineers entered into a project management contract in the amount of $150,715.04 to conduct project management for the Airport MIRL, PAPI, Beacon Replacement Project (AP026).

Due to the change orders to the Pavex Construction contract as described above, a corresponding change order is required to the Dibble Project Management Contract in the amount of $31,552.75.

The Town of Marana recently completed a Siting Study for the new Air Traffic Control Tower at Marana Regional Airport. The proposed location for the Air Traffic Control Tower conflicts with an existing duct bank which contains airfield lighting cables for several airfield electrical circuits. At the request of the Town, Dibble will develop construction drawings for the work associated with re-routing the duct bank around the footprint for the proposed Air Traffic Control Tower and associated infrastructure. The cost of this additional design work is $4,588.81.

The combined amount of these change orders is $36,141.56, which will bring the Dibble Project Management Contract to $186,856.60.

These change orders were necessary to avoid unnecessary contractor delay claims or costs or public health or safety hazards costs and the amount of these change orders exceeds $100,000.00; therefore, these change orders required immediate approval by the Town Manager. With active contracts and contractors in place, the Town Manager exercised his authority under section 3-4-8(B) of the Town Code to authorize change orders to the project. This item is on the agenda for the Town Council to ratify the Town Manager's action.

Financial Impact:

Fiscal Year:	2023
Budgeted Y/N:	Yes
Amount:	$178,000.49

These change orders will be funded with Airport Capital funds, GL Account # 52592000-8015-AP026. The $178,000.49 will be reimbursed to the Town through ADOT Grant #: E2S2N01C.

Staff Recommendation:

Staff recommends ratification of the Town Manager's approval of the change orders to the Airport MIRL, PAPI, & Beacon Replacement (AP026) project in the amount of $178,000.49.

Suggested Motion:

I move to ratify the Town Manager's approval of the change orders to the Airport MIRL, PAPI, & Beacon Replacement project in the amount of $178,000.49; to authorize the transfer of appropriations if necessary for the change orders; and to authorize the Town Manager or designee to execute the necessary documents to effectuate the change orders.

Attachments

No file(s) attached.

Council-Regular Meeting **C4**

Meeting Date: 08/03/2022

To: Mayor and Council

From: Kristin Taft, Grants Manager

Date: August 3, 2022

Strategic Plan Focus Area:
Commerce

Strategic Plan Focus Area Additional Info:
PRINCIPLE STATEMENT 2: WE WILL SEEK AND RETAIN DIVERSE INDUSTRIES AND COMMERCE.
Initiative 3: Invest in airport infrastructure and lease opportunities to grow airport operations.

Subject: *Resolution No. 2022-079: Relating to the Marana Regional Airport; approving and authorizing the Town Manager to execute an Airport Development Reimbursable Grant Agreement in the amount of $45,000.00 between the State of Arizona, by and through the Department of Transportation (ADOT), and the Town of Marana for the purpose of aiding in financing the "Master Plan ALP Update" project (Grant No. E3S2L 01P) (Kristin Taft)*

Discussion:
The Arizona Department of Transportation (ADOT), through its Multimodal Planning Division (the "State"), has provided the Town of Marana (the "Sponsor"), a grant agreement from State funds for the purpose of aiding in an upcoming project at the Marana Regional Airport.

The "Master Plan ALP Update" project (Grant No. E3S2L 01P) will fund the updated master plan for Marana Municipal Airport. The total project cost is $50,000; the maximum reimbursement available from the State to the Sponsor for this Agreement is $45,000. The minimum funding participation from the Town is 10% of the total cost ($5,000). If approved, work is expected to begin August 2022 and is expected to be completed by May 2023.

The agreement with ADOT requires the Town to approve and attach to the agreement a resolution by the Town Council certifying the following:

(1) The Town has the legal power and authority to do all things necessary, in order to undertake and carry out the project, and to accept, receive, and disburse grant funds from the State in aid of the project.
(2) The Town now has on deposit, or is in a position to secure, $5,000, or an equivalent amount represented by the Town's proposed labor and equipment costs, for use in defraying the Town's share of the costs of the project. The funds will come from the Town of Marana General Fund.
(3) The Town designates its Finance Director, Yiannis Kalaitzidis, to receive payments representing the State's share of project costs.
(4) The Town has on file with ADOT the requisite vendor identification and address information for project payments.

The resolution attached to these agenda materials satisfies the forgoing requirements.

Financial Impact:

Fiscal Year:	2023
Budgeted Y/N:	Yes
Amount:	$50,000

The total amount for the project is $50,000. The State reimburses $45,000 (90%) and the Town is responsible for the remaining $5,000 (10%). Budget capacity is available in the Airport fund.

Staff Recommendation:

Staff recommends that the Town Manager be authorized to execute the Grant Agreement with ADOT.

Suggested Motion:

I move to adopt Resolution No. 2022-079, approving and authorizing the Town Manager to execute an Airport Development Reimbursable Grant Agreement between the State of Arizona by and through the Department of Transportation (ADOT) and the Town of Marana for the purpose of aiding in financing the "Master Plan ALP Update" project (Grant No. E3S2L 01P).

Attachments

Resolution No. 2022-079
Exhibit A to Resolution

MARANA RESOLUTION NO. 2022-079

RELATING TO THE MARANA REGIONAL AIRPORT; APPROVING AND AUTHORIZING THE TOWN MANAGER TO EXECUTE AN AIRPORT DEVELOPMENT REIMBURSABLE GRANT AGREEMENT IN THE AMOUNT OF $45,000.00 BETWEEN THE STATE OF ARIZONA, BY AND THROUGH THE DEPARTMENT OF TRANSPORTATION (ADOT), AND THE TOWN OF MARANA FOR THE PURPOSE OF AIDING IN FINANCING THE "MASTER PLAN ALP UPDATE" PROJECT (GRANT NO. E3S2L 01P)

WHEREAS A.R.S. § 28-8411 authorizes the Town Council of the Town of Marana to undertake all activities necessary to acquire, establish, construct, own, control, lease, equip, improve, maintain, operate, and regulate an airport; and

WHEREAS A.R.S. § 28-8413 authorizes the Town to accept and receive federal and other monies for the acquisition, construction, enlargement, improvement, maintenance, equipment, or operation of an airport and to enter into agreements regarding the receipt of such monies; and

WHEREAS the purpose of the Airport Development Reimbursable Grant Agreement (Grant No. E3S2L 01P) is to provide $45,000.00 in State funding to aid in financing the Master Plan ALP Update for the Marana Regional Airport (the "Project"); and

WHEREAS the terms of the grant agreement require the Town to certify certain information by resolution approved by the Marana Town Council; and

WHEREAS the Mayor and Council feel it is in the best interests of the Town and its citizens to enter into the grant agreement and to certify the information required by the agreement.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE TOWN OF MARANA, ARIZONA, AS FOLLOWS:

SECTION 1. The Town hereby certifies that (1) the Town has the legal power and authority to do all things necessary in order to undertake and carry out the Project, and to accept, receive, and disburse grant funds from the State in aid of the Project; (2) the Town now has on deposit, or is in a position to secure, $5,000, or an equivalent amount represented by the Town's proposed labor and equipment costs, for use in defraying the

Town's share of the costs of the Project; (3) the Town designates its Finance Director, Yiannis Kalaitzidis, to receive payments representing the State's share of Project costs; and (4) the Town has on file with ADOT a vendor identification and address for Project payments.

SECTION 2. The Airport Development Reimbursable Grant Agreement (Grant No. E3S2L 01P), substantially in the same form attached to and incorporated by this reference in this resolution as Exhibit A, is hereby approved and authorized and the Town's Manager and staff are hereby directed and authorized to undertake all other and further tasks required or beneficial to carry out the terms, obligations, and objectives of this resolution.

PASSED AND ADOPTED by the Mayor and Council of the Town of Marana, Arizona, this 3rd day of August, 2022.

_____
Mayor Ed Honea

ATTEST:

_____
Cherry L. Lawson, Town Clerk

APPROVED AS TO FORM:

_____
Jane Fairall, Town Attorney

Grant Number E3S2L 01P
Town of Marana
Marana Regional Airport

Arizona Department of Transportation
Multimodal Planning Division
Aeronautics Group

Airport Development Reimbursable Grant Agreement

Part I

THIS AGREEMENT is entered into _____, 2022, between the STATE OF ARIZONA, acting by and through its DEPARTMENT OF TRANSPORTATION, through its Multimodal Planning Division (the "State") and the ***Town of Marana***, a political subdivision of the State of Arizona, (the "Sponsor") for a grant of State funds for the purpose of aiding in financing a Project of ***Master Plan ALP UPDATE –*** (the "Project"), for the improvement of the ***Marana Regional Airport*** (the "Airport").

WITNESSETH

Recitals:

1) The Sponsor desires, in accordance with the authority granted by Arizona Revised Statutes (A.R.S.) Section 28-8413, funds from the State for the purpose of airport planning and/or development.

2) The Arizona State Transportation Board, as approved on ***July 1, 2022***, and the Director of the Arizona Department of Transportation, in accordance with the authority granted by A.R.S. Sections 28-304, 28-363, and 28-401 and Title 28, Chapter 25, A.R.S., have authorized reimbursement to the Sponsor of funds expended for airport planning and/or development.

Now, therefore, in consideration of the foregoing recitals and of the covenants and agreements made by the parties herein to be kept and performed, the parties agree as follows:

Sponsor's Responsibility

1) The Sponsor shall accept this Agreement within 4 months of the date of the grant offer cover letter: ***July 19, 2022.*** This Grant offer, if not accepted by the Sponsor, shall expire at the end of the 4-month period.

2) The Sponsor shall commence the Project within 6 months of the date the grant was executed by the State. This Project will consist of the airport improvements as described in Exhibit C. The Sponsor shall proceed with due diligence and complete the Project in accordance with the provisions of this Agreement. The Sponsor shall provide and maintain competent supervision to complete the Project in conformance with the plans, specifications and work completion schedule incorporated as part of this Agreement.

3) The Sponsor shall submit completed Project Reimbursement and Milestone schedules, which shall be attached hereto, as Exhibit C, Schedules Two and Three respectively and shall complete the Project within that schedule. Any change to the schedule shall be submitted in writing and be approved by the State. A time extension beyond the State's obligation to provide funds herein must be reflected by formal Amendment to this Agreement.

4) The Sponsor shall comply with the Sponsor Assurances and abide by and enforce the General Provisions and Specific Provisions incorporated herein as Exhibits A, B and C respectively.

Obligations

1) The minimum funding participation from the Sponsor shall be **10%** as determined by the State.

2) The maximum reimbursement available from the State to the Sponsor for this Agreement shall be **$45,000.00**

3) Except as otherwise provided herein for the State's obligation to provide funds hereunder expires upon completion of the Project required herein or ***July 19, 2026***, whichever is earlier.

4) The State may, after agreeing to provide said funds to the Sponsor, withdraw/terminate the grant if the Project has not been initiated as evidenced by a Notice to Proceed within 6 months of the date the grant was executed by the State or has not progressed as scheduled over a period of 12 months or if the State determines that Sponsor is not otherwise complying with the terms of this Agreement. If it becomes necessary to terminate a grant at any time, the State will reimburse expenses of the Sponsor, approved by the State, up to the time of notification of cancellation provided Sponsor is not in default hereunder.

5) Sponsor acknowledges that in the event of a late payment or reimbursement by the State, the State shall have no obligation to pay a late payment fee or interest and shall not otherwise be penalized.

6) Notwithstanding anything to the contrary herein, in the case where funds are no longer available or have been withdrawn or not appropriated, or the Project is no longer in the State's best interest, the State shall have the right of termination at its sole option. The State shall not reimburse any costs incurred after receipt of the notice of termination. The Governor pursuant to A.R.S. Section 38-511 hereby puts all parties on notice that this Agreement is subject to cancellation.

Preliminary Work Provision

Any preliminary work, for which costs for this Project were incurred after ***July 1, 2022*** shall be considered eligible for reimbursement provided that said costs are directly related to the Project on which this Agreement is written. The State shall review related records and determine eligibility at its sole discretion.

Grant Number E3S2L 01P
Town of Marana
Marana Regional Airport

Part II

The Sponsor shall approve and attach to this agreement a resolution, or Motion, or Board Action by its governing body that certifies as follows:

1) The Sponsor has the legal power and authority:

   a) to do all things necessary, in order to undertake and carry out the Project;

   b) to accept, receive and disburse grant funds from the State in aid of the Project.

2) The Sponsor now has on deposit, or is in a position to secure Five Thousand Dollars ($ 5,000), or an equivalent amount represented by Sponsor's proposed labor and equipment costs, for use in defraying Sponsor's share of the costs of the Project. The present status of these funds is as follows:

Town of Marana General Fund
(enter local funding type and location)

3) The Sponsor hereby designates Yiannis Kalaitzidis (Name), Finance Director (Title) to receive payments representing the State's share of project costs.

_____ Town Manager
Signature of Sponsor's Representative — Title of Representative

4) The Sponsor has on file with ADOT the following vendor identification and address for project payments:

Sponsor Vendor Id #: **IV0000001820**

Sponsor Vendor Address: **11555 W. Civic Ctr Dr,**
Marana, AZ 85653

Exhibits

The following Exhibits are incorporated herewith and form a part of this Agreement.

Exhibit A - Sponsor Assurances

Exhibit B - General Provisions

Exhibit C - Specific Provisions and Project Schedules

Grant Number E3S2L 01P
Town of Marana
Marana Regional Airport

STATE:

State of Arizona
Department of Transportation
Multimodal Planning Division

By: _____

Title: MPD Division Director

Date: _____

SPONSOR:

Town of Marana
Marana Regional Airport

By: _____

Title: Town Manager

Date: _____

WITNESSED BY:

Signature: _____

Print Name: _____

Date: _____

WITNESSED BY:

Signature: _____

Print Name: _____

Date: _____

Grant Number E3S2L 01P
Town of Marana
Marana Regional Airport

EXHIBIT A

Sponsor Assurances

Upon acceptance of the grant offer by the Sponsor, these assurances will become a part of this Agreement. The Sponsor hereby covenants and agrees with the State as follows:

General

1) That the Project is consistent with plans (existing at the time of approval of the Project) of political jurisdictions authorized by the State to plan for the development of the area surrounding the Airport and has given fair consideration to the interest of communities in or near where the Project is to be located. In making a decision to undertake any airport development Project under this Agreement the Sponsor insures that it has undertaken reasonable consultation with affected parties using the Airport at which the Project is proposed. All appropriate development standards of Federal Aviation Administration (FAA) Advisory Circulars, Orders, or Federal Regulations shall be complied with. All related state and federal laws shall be complied with.

2) That these covenants shall become effective upon execution of this Agreement for the Project or any portion thereof, made by the State and shall remain in full force and effect throughout the useful life of the facilities or the planning project's duration developed under the grant, but in any event, not less than twenty (20) years from the date of acceptance of the grant offer by the Sponsor.

3) The Sponsor certifies in this Agreement that it is a political subdivision of the State and is the public agency with control over a public-use Airport and/or on behalf of the possible future development of an Airport and is eligible to receive grant funds for the development or possible development of an Airport under its jurisdiction.

4) The Sponsor further agrees it holds good title, satisfactory to the State, to the landing area of the Airport or site thereof, or will give assurance satisfactory to the State that good title will be acquired.

5) That the Sponsor is the owner or lessee of the property or properties on which the Airport is located and that the lease guarantees that the Sponsor has full control of the use of the property for a period of not less than twenty (20) years from the date of this Agreement. All changes in airport ownership or to an airport lease shall be approved by the State.

6) The Sponsor agrees that it has sufficient funds available for that portion of the project costs which are not to be paid by the State (or the United States).

7) The Sponsor agrees to provide and maintain competent supervision to complete the Project in conformance with this Agreement.

8) Preserving Rights and Powers: The Sponsor agrees it shall not take or permit any action which would operate to deprive it of any of the rights and powers necessary to perform any or all of the terms, conditions and assurances in this Agreement without written permission from the State, and shall act promptly to acquire, extinguish or modify any outstanding rights or claims of right by others which would interfere with such performance by the Sponsor. This will be done in a manner acceptable to the State. The Sponsor shall not sell, lease, encumber or otherwise transfer or dispose of any part of its title or other interests in the property shown on the airport property map included in the most recent FAA-approved Airport Layout Plan, or to that portion of the property upon which State

funds have been expended, for the duration of the terms, conditions and assurances in this Agreement without approval by the State. If the transferee is found by the State to be eligible under Title 49, United States Code, to assume the obligations of this Agreement and to have the power, authority and financial resources to carry out such obligations, the Sponsor shall insert in the contract or document transferring or disposing of Sponsor's interest and make binding upon the transferee all the terms, conditions and assurances contained in this Agreement.

9) Public Hearings: In Projects involving the location of an Airport, an airport runway or a major runway extension, the Sponsor has afforded the opportunity for public hearings for the purpose of considering the economic, social and environmental impacts of the Airport or runway location and its consistency with goals and objectives of such planning as has been carried out by the community and it shall, when requested by the State, submit a copy of such hearings to the State.

Financial

Pursuant to A.R.S. 35-326, the Sponsor may elect to utilize the Local Government Investment Pool ("LGIP") maintained by the state treasurer. The Sponsor shall request written approval from the State to use the LGIP. Thereafter, the State may deposit the funds authorized by the grant into the Sponsor's account. After approval of the reimbursements by the state, the funds shall be disbursed through the LGIP account to the Sponsor. The disbursements shall be made pursuant to the applicable laws and regulations.

The Sponsor shall establish and maintain for each Project governed by this Agreement, an adequate accounting record to allow State personnel to determine all funds received (including funds of the Sponsor and funds received from the United States or other sources) and to determine the eligibility of all incurred costs of the Project. The Sponsor shall segregate and group project costs into cost classifications as listed in the Specific Provisions of Exhibit C.

Record Keeping

The Sponsor shall maintain accurate records of all labor, equipment and materials used in this Project and that upon reasonable notice, shall make available to the State, or any of their authorized representatives, for the purpose of audit and examination all records, books, papers or documents of the recipient relating to work performed under this Agreement. For airport development Projects, make the Airport and all airport records and documents affecting the Airport, including deeds, leases, operation and use agreements, regulations and other instruments, available for inspection by any duly authorized agent of the State upon reasonable request.

Airport Based Aircraft Reporting

The Sponsor shall furnish to the State on a quarterly basis, a current detailed listing (including: Registration/N Number, Name, Address and Phone Number of Owner) of all based aircraft on the Airport in a form approved by the State.

Airport Layout Plan

1) The Sponsor shall maintain a current signed/approved Airport Layout Plan (ALP) of the Airport, which shows building areas and landing areas, indicating present and planned development and to furnish the State an updated ALP of the Airport as changes are made.

2) The Sponsor shall be required to prepare an ALP for update or revalidation in accordance with current FAA and State standard guidelines. The ALP will indicate any deviations from FAA design standards as outlined in current FAA

Advisory Circulars, orders or regulations. A copy of the signed/approved ALP in electronic format shall be forwarded to the State after authentication by FAA or the State.

3) The Sponsor shall assure that there are no changes to the airport property boundaries, together with any off-site areas owned or controlled by the Sponsor which support the Airport or its operations as a part of this project.

4) If a change or alteration is made at the Airport which the State determines adversely affects the safety, utility or efficiency of the Airport, or any State funded property on or off Airport which is not in conformity with the ALP as approved by the State, the Sponsor will, if requested by the State, eliminate such adverse affect in a manner approved by the State.

Immediate Vicinity Land Use Restriction

The Sponsor shall restrict the use of land, adjacent to or in the immediate vicinity of the Airport, to activities and purposes compatible with normal airport operations and to take appropriate action including the adoption of appropriate zoning laws. In addition, if the Project is for noise compatibility or to protect the 14 CFR Part 77 imaginary surfaces of the Airport, the Sponsor will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the Airport, of the noise compatibility program measures or the imaginary surfaces of the Airport upon which State funds have been expended.

Airport Operation

1) The Sponsor shall promote safe airport operations by clearing and protecting the approaches to the Airport by removing, lowering, relocating, marking and/or lighting existing airport hazards and to prevent, to the extent possible, establishment or creation of future airport hazards. The Sponsor shall take appropriate action to assure such terminal airspace as is required to protect instrument and visual operations to the Airport (including established minimum flight altitudes) will be adequately cleared and protected by preventing the establishment or creation of future airport hazards. The Sponsor shall promptly notify airmen of any condition affecting aeronautical use of the Airport.

2) The Sponsor further agrees to operate the Airport for the use and benefit of the public and to keep the Airport open to all types, kinds and classes of aeronautical use without discrimination between such types, kinds and classes; provided that the Sponsor shall establish such fair, equal and nondiscriminatory conditions to be met by all users of the Airport as may be necessary for the safe and efficient operation of the Airport; and provided further, that the Sponsor may prohibit any given type, kind or class of aeronautical use of the Airport if such use would create unsafe conditions, interfere with normal operation of aircraft, or cause damage or lead to the deterioration of the runway or other airport facilities.

3) In any agreement, contract, lease or other arrangement under which a right or privilege at the Airport is granted to any person, firm or corporation to conduct or engage in any aeronautical activity for furnishing services to the public at the Airport, the Sponsor shall insert and enforce provisions requiring said person, firm or corporation:

   a) to furnish services on a reasonable and not unjustly discriminatory basis to all users thereof and charge reasonable and not unjustly discriminatory prices for each unit or service;

   b) and be allowed to make reasonable and nondiscriminatory discounts, rebates or similar types of price reductions to volume purchasers;

c) each Fixed Based Operator (FBO) and Air Carrier at the Airport shall be subject to the same rates, fees, rentals and other charges as are uniformly applicable to all other FBOs and Air Carriers making the same or similar uses of the Airport and utilizing the same or similar facilities;

d) each Air Carrier using such Airport shall have the right to service itself or to use any FBO that is authorized or permitted by the Airport to serve any Air Carrier at the Airport.

4) The Sponsor shall not exercise or grant any right or privilege which operates to prevent any person, firm or corporation operating aircraft on the Airport from performing any services on its own aircraft with its own employees (including but not limited to maintenance, repair and fueling) that it may choose to perform. In the event the Sponsor itself exercises any of the rights and privileges referred to in this assurance, the services involved will be provided on the same conditions as would apply to the furnishing of such services by a commercial aeronautical operator authorized by the Sponsor under these provisions.

5) The Sponsor shall suitably operate and maintain the Airport and all facilities thereon or connected therewith which are necessary for airport purposes and to prohibit any activity thereon which would interfere with its use for aeronautical purposes and to operate essential facilities, including night lighting systems, when installed, in such manner as to assure their availability to all users of the Airport; provided that nothing contained herein shall be construed to require that the Airport be operated and maintained for aeronautical uses during temporary periods when snow, flood or other climatic conditions interfere substantially with such operation and maintenance.

6) The Sponsor shall not permit an exclusive right for the use of the Airport by any person providing, or intending to provide, aeronautical services to the public. For purposes of this paragraph, providing services at an Airport by a single FBO shall not be construed as an "exclusive right" if:

a) it would be unreasonably costly, burdensome or impractical for more than one FBO; and

b) if allowing more than one FBO to provide such services would require a reduction of space leased pursuant to an existing agreement between a single FBO and the Airport.

Note: Aeronautical activities that are covered by this paragraph include, but are not limited to: charter flights, pilot training, aircraft rental, sightseeing, air carrier operations, aircraft sales and services, aerial photography, agricultural spraying, aerial advertising and surveying, sale of aviation petroleum products whether or not conducted in conjunction with any other aeronautical activity, repair and maintenance of aircraft, sale of aircraft parts, and any other activities which because of their direct relationship to the operation of aircraft can be regarded as an aeronautical activity.

7) The Sponsor shall terminate any exclusive right to conduct an aeronautical activity now existing at the Airport before any grant of assistance from the State. However, there shall be no limit on the duration of the assurances regarding Exclusive Rights and Airport Revenue so long as the Airport is used as an Airport. There shall be no limit on the duration of the terms, conditions, and assurances with respect to real property acquired with State funds.

8) Airport Pavement Preservation Program: The Sponsor certifies that they have implemented an effective pavement preservation management program at the Airport in accordance with Public Law 103-305 and with the most current associated FAA policies and guidance for the replacement, reconstruction or maintenance of pavement at the Airport. The Sponsor assures that it shall use and follow this program for the useful life of the pavement constructed, reconstructed or repaired with financial assistance from the State and that it will provide such reports on pavement condition and pavement management programs as may be required by the State.

Sponsor Transactions

The Sponsor shall refrain from entering into any transaction which would deprive the Sponsor of any of the rights and powers necessary to perform any or all of the covenants made herein, unless by such transaction the obligation to perform all such covenants is assumed by another public agency eligible to assume such obligations and having the power, authority and financial resources to carry out such obligations; and, if an arrangement is made for management or operation of the Airport by an agency or person other than the Sponsor, the Sponsor shall reserve sufficient powers and authority to insure that the Airport will be operated and maintained in accordance with these covenants or insure that such an arrangement also requires compliance therewith.

Airport Revenues

The Sponsor shall maintain a fee and rental structure for the facilities and services at the Airport which will make the Airport as self-sustaining as possible under the circumstances existing at the particular Airport, taking into account such factors as the volume of traffic and economy of collection. All revenues generated by the Airport (and any local taxes established after Dec 30, 1987), will be expended by it for the capital or operating costs of the Airport; the local airport system; or the local facilities which are owned or operated by the owner or operator of the Airport and which are directly or substantially related to the actual air transportation of passengers or property, on or off the Airport.

Disposal of Land

1) For land purchased under a grant for airport development purposes (it is needed for aeronautical purposes, including runway protection zones, or serve as noise buffer land; and revenue from the interim use of the land contributed to the financial self-sufficiency of the Airport), the Sponsor shall apply to the State and FAA for permission to dispose of such land. If agreed to by the State and/or FAA, the Sponsor shall dispose of such land at fair market value and make available to the State and FAA an amount that is proportionate to the State and FAA's share of the cost of the land acquisition. That portion of the proceeds of such disposition, which is proportionate to the share of the cost of acquisition of such land, shall be (a) reinvested in another eligible airport development Project or Projects approved by the State and FAA or (b) be deposited to the Aviation Trust Fund if no eligible Project exists.

2) Disposition of such land shall be subject to the retention or reservation of any interest or right therein necessary to ensure that such land will only be used for purposes which are compatible with noise levels associated with operation of the Airport.

Grant Number E3S2L 01P
Town of Marana
Marana Regional Airport

EXHIBIT B

General Provisions

Employment of Consultants

The term consultant, as used herein, includes planners, architects and/or engineers. If a consultant is to be used for this Project, the Sponsor agrees to consider at least three (3) consultant firms. If the Sponsor has contracted with or will contract with a consultant on a retainer basis, the Sponsor assures to the State that prior to entering such a contract, at least three (3) consultants were or will be considered. The Sponsor shall submit to the State, for review and approval, a copy of the request for proposals and/or request for qualifications, and the proposed consultant contract prior to its execution and upon award of the contract, a fully executed copy. All requests for qualifications and requests for proposals shall be in accordance with A.R.S. 34, Chapters 1, 2 and 6, and shall include a list of projects and project locations to be awarded project contracts.

Contracts

1) The Sponsor as an independent entity and not as an agent of the State may obtain the services required in order to fulfill the work outlined in the Project Description as approved by the State for funding in the Airport Capital Improvement Program. All contracts awarded to accomplish the project work described in this Agreement shall state:

   a) The name of the consultant authorized to perform the work and to communicate on behalf of the Sponsor;

   b) The Sponsor must insure that contracts issued under this Agreement comply with the provisions of Arizona Executive Order 75-5 as amended by Arizona Executive Order 2009-9, relating to equal opportunity;

   c) The terms for termination of the contract either for failure to perform or in the best interest of the Sponsor;

   d) The duly authorized representatives of the State shall have access to any books, documents, papers and records of the consultant and/or contractor which are in any way pertinent to the contract for a period of five years, in accordance with A.R.S. 35-214, for the purpose of making inspections, audits, examinations, excerpts and transcriptions.

2) All contracts shall stipulate and make clear:

   a) The responsibilities of the consultant to gain authorization for changes on the Project which may have an affect on the contract price, scope, or schedule;

   b) That all construction contractors and sub-contractors hired to perform services, shall be in compliance with A.R.S. 32, Chapter 10.

   c) That any materials, including reports, computer programs or files and other deliverables created under this Agreement are the sole property of the Sponsor. That these items shall be made available to the public. The Contractor/Consultant is not entitled to a patent or copyright on these materials and may not transfer the patent or copyright to anyone else.

d) That any travel shall be reimbursable by the State only within the rules and costs in accordance with the State of Arizona Travel Policy.

3) **Liability of Subcontractors**

1) It shall be the responsibility of the Sponsor to ensure through contractual agreement that any independent contractor, subcontractors, or sub consultants utilized by the Sponsor, defend, indemnify, save, and hold harmless the State and any of their departments, divisions, agencies, officers, or employees who may be obligated to pay by reason of any liability imposed upon any of the above for damages arising out of any error, negligence, omissions, or act of the independent contractor, subcontractor, or sub consultant.

Conflict of Interest

Each consultant submitting a proposal shall certify that it shall comply with, in all respects, the rules of professional conduct set forth in Arizona Administrative Code R4-30-301. In addition, a conflict of interest shall be cause for disqualifying a consultant from consideration; or terminating a contract if the conflict should occur after the contract is made. A potential conflict of interest includes, but is not limited to:

1) Accepting an assignment where duty to the client would conflict with the consultant's personal interest, or interest of another client.

2) Performing work for a client or having an interest which conflicts with this contract.

Reports

Reports

1) Reimbursement Requirements

a). The Sponsor shall submit quarterly Grant Reimbursement Requests (GRR's) to the Aeronautics Grant Manager after the date of the grant agreement has been signed by both Sponsor and State.

b). The Sponsor shall prepare quarterly (GRR) forms with the appropriate invoices attached which clearly indicate the project's progress to date and the amount of reimbursement due by virtue of that progress. All GRR's for payment shall be for work completed unless otherwise agreed to by State.

(i). The State has the right to withhold reimbursement payments if the Sponsor does not fill out the State GRR form correctly. If the State does decide to withhold payments to the Sponsor for any reason, it must provide written notification and an explanation to the Sponsor within ten (10) days of the date of the invoice submitted.

c). The State has the right to suspend any current or future grants should the Sponsor neglect to make a grant reimbursement request after 180 days as stated on the **Projected Reimbursement Requests / State Cash Flow** section of the grant agreement under Exhibit C, Schedule 2.

d). An Airport may be awarded a pavement management agreement through the State's Airport Pavement Management System (APMS Program). Sponsors receiving APMS treatment will be responsible for 10% of the eligible construction cost. Outstanding balances after final costs reconciliation shall be paid to the State upon written notice. Any unpaid balance by the Sponsor can result in suspension of participation in the State's Airport Pavement Management System and State/Local Grants.

2) The Sponsor shall submit monthly status reports during planning, shall submit monthly status reports during design, and shall submit weekly reports during construction. All reports shall reflect, at a minimum, the progress accomplished in relation to the Grant and Project schedules and milestones, the reasons for any changes, and the recommended corrections of problems encountered. Upon completion of the Project, the Sponsor shall submit a letter to the State specifying that the Project has been completed to their satisfaction and that the consultant and the contractor have completed their contractual responsibilities.

Changes

Any changes to the consultant contract, authorized by the Sponsor, that include additional funds, time and/or scope, shall be by amendment and shall be approved by the State prior to being made in order to be eligible for reimbursement. Approval of a change by the State shall not obligate the State to provide reimbursement beyond the maximum funds obligated by this Agreement. Any increase to the amount of funds authorized hereunder, to the expiration date of this agreement, or to the scope of work included in this agreement must be by formal amendment, and signed by all parties.

Any changes to the contract documents, authorized by the Sponsor, must be approved by the State prior to any changes being made in order to be eligible for reimbursement.

Audit

Upon completion of the Project, the Sponsor agrees to have an audit performed. The audit examination may be a separate project audit or in accordance with the Single Audit Act of 1984 (Single Audit). If the Sponsor is required under law to have a Single Audit, this Project shall be considered for inclusion in the scope of examination.

The Sponsor shall keep all project accounts and records which fully disclose the amount and disposition by the recipient of the proceeds of the grant, the total cost of the Project in connection with which the grant is given or used, and the amount or nature of that portion of the cost of the Project supplied by other sources, and such other financial records pertinent to the Project. The accounts and records will be kept in accordance with A.R.S. 35-214.

In any case in which an independent audit is made of the accounts of a Sponsor relating to the disposition of the proceeds of a grant relating to the Project in connection with which the grant was given or used, it shall file a certified copied of such audit with the State not later than six (6) months following the close of the fiscal year in which the audit was made.

The Sponsor shall make available to the State or any of their other duly authorized representatives, for the purpose of audit and examination, any books, documents, papers and records of the recipient that are pertinent to the grant. The Sponsor further agrees to provide the State a certified copy of the audit report. The State is to determine the acceptability of this audit.

Suspension

If the Sponsor fails to comply with any conditions of this Agreement, the State, by written notice to the Sponsor, may suspend participation and withhold payments until appropriate corrective action has been taken by the Sponsor. Costs incurred during a period of suspension may not be eligible for reimbursement by the State.

Failure to Perform

If the Sponsor fails to comply with the conditions of this Agreement the State, may by written notice to the Sponsor, terminate this Agreement in whole or in part. The notice of termination will contain the reasons for termination, the effective date, and the eligibility of costs incurred prior to termination. The State shall not reimburse any costs incurred after the date of termination.

Termination for Convenience

When the continuation of the Project will not produce beneficial results commensurate with the further expenditure of funds or when funds are not appropriated or are withdrawn for use hereunder, the State may terminate this Agreement. In the case where continuation of the Project will not produce beneficial results, the State and the Sponsor shall mutually agree upon the termination either in whole or in part. In the case where funds are no longer available or have been withdrawn or not appropriated, or the Project is no longer in the State's best interest, the State shall have the right of termination as its sole option. The State shall not reimburse any costs incurred after receipt of the notice of termination. The Governor pursuant to A.R.S. Section 38-511 hereby puts all parties on notice that this Agreement is subject to cancellation.

Waiver by State

No waiver of any condition, requirement or right expressed in this Agreement shall be implied by any forbearance of the State to declare a default, failure to perform or to take any other action on account of any violation that continues or repeats.

Compliance with Laws

The Sponsor shall comply with all Federal, State and Local laws, rules, regulations, ordinances, policies, advisory circulars, and decrees that are applicable to the performance hereunder.

Arbitration

In the event of a dispute, the parties agree to use arbitration to the extent required by A.R.S. Section 12-1518.

Jurisdiction

Any litigation between the Sponsor and the State shall be commenced and prosecuted in an appropriate State court of competent jurisdiction within Maricopa County, State of Arizona.

Excess of Payments

If it is found that the total payments to the Sponsor exceed the State's share of allowable project costs, the Sponsor shall promptly return the excess to the State. Final determination of the State's share of allowable costs shall rest solely with

the State. Any reimbursement to the Sponsor by the State not in accordance with this Agreement or unsubstantiated by project records will be considered ineligible for reimbursement and shall be returned promptly to the State.

State Inspectors

At any time and/or prior to final payment of funds for work performed under this Agreement, the State may perform an inspection of the work performed to assure compliance with the terms herein and to review the workmanship of the Sponsor's contractors and/or consultants. No inspector is authorized to change any provisions of this Agreement or any provisions of Agreements between the Sponsor and the Sponsor's contractor and/or consultant.

Indemnification

The State of Arizona, acting by and through the Arizona Department of Transportation, does not assume any liability to third persons nor will the Sponsor be reimbursed for the Sponsor's liability to third persons resulting from the performance of this Agreement or any subcontract hereunder.

The Sponsor shall indemnify and hold harmless the State, any of their departments, agencies, officers and employees from any and all liability, loss or damage the State may suffer as a result of claims, demands, costs or judgments of any character arising out of the performance or non-performance of the Sponsor or its independent contractors in carrying out any provisions of this Agreement. In the event of any action, this indemnification shall include, but not be limited to, court costs, expenses of litigation and reasonable attorney's fees.

Required Provisions Deemed Inserted

Each and every provision of law and clause required by law to be inserted in this Agreement shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, this Agreement shall forthwith be physically amended to make such insertion or correction.

Property of the Sponsor and State

Any materials, including reports, computer programs or files and other deliverables created under this Agreement are the sole property of the Sponsor. The Contractor/Consultant is not entitled to a patent or copyright on these materials and may not transfer the patent or copyright to anyone else. The Sponsor shall give the State unrestricted authority to publish, disclose, distribute and otherwise use at no cost to the State any of the material prepared in connection with this grant. At the completion of the project, the Sponsor shall provide the State with an electronic copy, in a format useable by the State, and one hard copy in a format useable by the State, of final plans, specifications, reports, planning documents, and/or other published materials as produced as a result of this project.

Title VI List of Pertinent Nondiscrimination Authorities

During the performance of this Agreement, the Sponsor, for itself, its assignees, and successors in interest (hereinafter referred to as the “Sponsor”) agrees to comply with the following non-discrimination statutes and authorities, Including but not limited to:

1) Title VI of the Civil Rights Act of 1964 (42 U.S.C. §2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
2) 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation – Effectuation of Title VI of The Civil Rights Act of 1964);
3) The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
4) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
5) The Age Discrimination Act of 1975, as amended, (42 U.S. C. § 6101 et seq.), (prohibits discrimination on the basis of age);
6) Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
7) The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs of activities" to include all the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
8) Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
9) The Federal Aviation Administration's Non-discrimination statute (49 U.S.C § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
10) Executive Order 12898, Federal Actions to Address Environmental justice in Minority Populations and Low-Income Populations, which ensures discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
11) Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin, discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
12) Title IX of the Education Amendments of 1972, as amended, which prohibits you from discrimination because of sex in education programs or activities (20 U.S.C 1681 et. Seq.).
13) All parties shall comply with all applicable federal, state, county, cities, and local laws, rules, regulations, and assurances in addition to all applicable provisions of Title 14 (Aeronautics and Space Chapter 1 – Federal Aviation Administration, Department of Transportation) and Title 49 (United States Department of Transportation) and other applicable Codes of Federal Regulations where and when relevant.

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Town of Marana
Marana Regional Airport

EXHIBIT C

Specific Provisions and Project Schedules

Provisions for Planning

Financial Cost Categories

The Sponsor shall segregate and group project costs in categories as follows:

1) "Planning" (as applicable), including consulting services.

2) "Sponsor Administration" directly associated with this Project (not to exceed 5% of planning consulting services).

3) "Sponsor Force Account" contribution (if applicable).

4) "Other" with prior approval of the State.

Planning Documents

1) The Sponsor shall include in all published material in connection with the planning Project a notice that the material was prepared under a grant provided by the State. The Sponsor shall give the State unrestricted authority to publish, disclose, distribute and otherwise use any of the material prepared in connection with this grant.

2) The Sponsor shall make planning material available for examination by the public and agrees that no material prepared with funds under this Project shall be subject to copyright. That approval of this Project grant or approval of the planning material developed as a part of this grant does not constitute or imply assurance or commitment on the part of the State to approve pending or future application for a State grant or funding.

3) The Sponsor shall appoint a Planning Advisory Committee (PAC) for this Project, which will have the opportunity to furnish information, and review the plan as it is developed. Members of the PAC shall be as deemed appropriate to address the special issues of the Project, except that at least one member shall be a non-aviation citizen of the area, and one shall be a representative of the ADOT Aeronautics Group. An invitation will be given to the affected military installations and the Arizona State Land Department (as appropriate) to participate on the Planning Advisory Committee. The Sponsor shall hold a minimum of three meetings throughout the Project, including a minimum of two meetings between the Sponsor, the consultant, and the PAC. A minimum of one public meeting shall be held during the Project. The Sponsor may not accomplish the final acceptance of the plan until the State has reviewed and commented on the work performed. The comments provided by the State shall not be construed as approval of the planning document.

4) If the planning performed under this Agreement covers an existing or future airport not located on properties owned or leased by the Sponsor, the Sponsor agrees to obtain full control of the property for a period of not less than twenty (20) years. All changes to airport ownership or to any airport lease shall be approved by the State.

5) At the completion of the Project, the Sponsor agrees to provide an electronic copy, in a format usable by the State, of final plans, planning documents, and/or other published materials produced as a result of this planning Project.

Project Schedules for Planning

The Schedule Forms are intended to identify and monitor project scope, costs, and basic milestones that will be encountered during various phases of the Project. The Sponsor shall complete these three schedules showing the project description and total costs, project reimbursements (cash flow) schedule and project milestones.

Schedule One shows the total Project estimated costs associated with each share - State and Federal and Local. Schedule Two shows a projected cash flow for State funds only. The Sponsor is to estimate requests to the State for Project reimbursement. Schedule Three shows anticipated dates of Project milestones. These schedules will be used to keep track of the Project's progress. Be sure to develop realistic schedules.

As the project progresses, and the original reimbursement schedule and or milestone dates change, the Sponsor must submit a revised Schedule to the State for approval.

Schedule One
Project Description and Funding Allocation

Detailed Project Description: ***Master Plans: ALP UPDATE***

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Project Cost Category	**Total Estimated Project Cost**	**Estimated Local Share**	**Estimated Federal Share**	**Estimated State Share***
Planning Costs	$ 50,000	$ 5,000	$	$ 45,000
Sponsor Administration**	$	$	$	$
Sponsor Force Account Work***	$	$	$	$
Other	$	$	$	$
Total Project Costs	$	$	$	$

*Total of this column to be used in Schedule Two.
** Sponsor Administration is not eligible for reimbursement above 5% of the planning consulting service costs.
*** All force account work is to be approved by the State prior to the grant agreement being signed.

Grant Number E3S2L 01P
Town of Marana
Marana Regional Airport

Schedule Two
Planning Project Reimbursement Schedule

The Sponsor must complete this Project Reimbursement Schedule showing the projected cash flow of State grant funds only for this Project. Projections must include all consultant and contractor services. The reimbursement schedule should be a realistic schedule and will be used to keep track of a project's progress. Reimbursement requests must be submitted regularly by the Sponsor while the grant is active. The cash flow should reflect when a request is submitted to the State, not when invoices are paid by the Sponsor.

Instructions:

1) For "Total State Funds" below, enter the Total Project Costs/Estimated State Share from Schedule One.

2) For each month/year, indicate the projected reimbursement request amount for **State Funds Only** (use whole dollars only, e.g. $540 or $1,300).

3) Continue the process by entering a Zero (Ø) in the month/year for which no reimbursement is anticipated and/or a dollar amount of the reimbursement, until the total State funds are accounted for in the cash flow.

Total State Funds: $45,000.00

Projected Reimbursement Requests / State Cash Flow

Calendar Year	Jan	Feb	Mar	Apr	May	Jun
2022	$	$	$	$	$	$
2023	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$
2024	$	$	$	$	$	$
2025	$	$	$	$	$	$
2026	$	$	$	$	$	$
Calendar Year	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
2022	$	$ 5,000	$ 5,000	$ 5,000	$ 5,000	$ 5,000
2023	$	$	$	$	$	$
2024	$	$	$	$	$	$
2025	$	$	$	$	$	$
2026	$	$	$	$	$	$

Grant Number E3S2L 01P
Town of Marana
Marana Regional Airport

Grants expire 4 years from the date approved by the State Transportation Board. The Sponsor shall schedule the work to be completed within the 4 years.

Schedule Three
Planning Project Milestones

Milestone Duration Guidelines

The below duration periods are intended to provide guidelines for you to consider. These are average time periods (in calendar days), but it is understood these periods may vary by Sponsor and Project, and are subject to modification. If an entry on the form is not applicable write N/A.

1) The Consultant Selection Phase for all Projects, regardless of type, is approximately ninety (90) days but should not exceed one hundred eighty (180) days.
2) The Planning Phase is subject to the type and complexity of the Project, however, most planning projects can be accomplished within seven hundred thirty (730) days.
3) State review periods should be fifteen (15) days.

Milestones	Duration # of Days	Start Date Proposed	Completion Date Proposed
Consultant Selection Phase		**mm/dd/year**	**mm/dd/year**
Submit Scope for State Review/Approval*		08/01/2022	08/15/2022
Submit Contract for State Review/Approval		08/15/2022	08/30/2022
Award Consultant Contract		08/30/2022	08/30/2022
Planning Phase			
Sponsor Issue Notice to Proceed		09/01/2022	09/01/2022
Submit Aircraft Forecasts to FAA		09/01/2022	09/15/2022
First Planning Advisory Committee Meeting		09/16/2022	10/01/2022
Public Workshop		10/01/2022	10/30/2022
Final Planning Advisory Committee Meeting		11/01/2022	11/30/2022
Submit Final Draft to FAA and State		12/01/2022	12/15/2022
Final Phase			
Master Plan Approval of Board/Council		01/01/2023	01/30/2023
Submit Final Report and Draft ALP		02/01/2023	02/28/2023
Submit Approved ALP to State		03/01/2023	03/30/2023
Submit Final Reimbursement Request and Sponsors Closeout Letter		04/01/2023	04/30/2023

* The solicitation for qualifications and the resulting service agreements must contain a list of projects, including this grant project, per A.R.S. 34, Chapter 6

Council-Regular Meeting **C5**

Meeting Date: 08/03/2022

To: Mayor and Council

From: David Udall, Assistant Town Attorney

Date: August 3, 2022

Strategic Plan Focus Area:
Not Applicable

Subject: *Resolution No. 2022-080: Relating to Permanent Base Adjustment; authorizing Town staff to transmit a copy of the publicity pamphlet for the Town's permanent base adjustment ballot measure to the Arizona Auditor General, and to carry out all other actions necessary or prudent to comply with election laws and regulations (David Udall)*

Discussion:

On June 7, 2022, the Mayor and Council adopted Resolution No. 2022-057, approving the submission of the following proposal to the voters of the Town of Marana: "Shall the expenditure base of the Town of Marana be permanently adjusted by $1,797,761?" The Town plans to submit this permanent base adjustment ballot measure to the voters at the November 8, 2022 general election.

State law requires the Town to prepare a publicity pamphlet that includes, among other things, any arguments submitted in favor of or against the permanent base adjustment measure. The Town Clerk has placed a notice in the *Daily Territorial*, notifying the public that arguments for and against the measure will be accepted no later than 5:00 PM on Wednesday, August 10, 2022.

Pursuant to A.R.S. § 41-563.03(D), the Town Council must transmit a copy of the printed publicity pamphlet to the Arizona Auditor General before the election. If adopted, this resolution will authorize Town staff to transmit a copy of the publicity pamphlet to the Auditor General and to carry out all other actions necessary or prudent to comply with election laws and regulations related to the permanent base

adjustment ballot measure.

Staff Recommendation:

Staff recommends the approval of Resolution No. 2022-080.

Suggested Motion:

I move to adopt Resolution No. 2022-080, authorizing Town staff to transmit a copy of the publicity pamphlet for the Town's permanent base adjustment ballot measure to the Arizona Auditor General, and to carry out all other actions necessary or prudent to comply with election laws and regulations.

Attachments

Resolution No. 2022-080

MARANA RESOLUTION NO. 2022-080

RELATING TO PERMANENT BASE ADJUSTMENT; AUTHORIZING TOWN STAFF TO TRANSMIT A COPY OF THE PUBLICITY PAMPHLET FOR THE TOWN'S PERMANENT BASE ADJUSTMENT BALLOT MEASURE TO THE ARIZONA AUDITOR GENERAL, AND TO CARRY OUT ALL OTHER ACTIONS NECESSARY OR PRUDENT TO COMPLY WITH ELECTION LAWS AND REGULATIONS

WHEREAS the Arizona State Constitution permits the Town to submit to the voters a permanent adjustment to the Town's base expenditure limitation; and

WHEREAS, on June 7, 2022, the Mayor and Council adopted Resolution No. 2022-057, approving the submission of the following proposal to the voters of the Town of Marana: "Shall the expenditure base of the Town of Marana be permanently adjusted by $1,797,761?"; and

WHEREAS the Town plans to submit the permanent base adjustment ballot measure to the voters at the November 8, 2022 general election; and

WHEREAS A.R.S. § 41-563.03 and § 19-123 require the Town to prepare a publicity pamphlet including, among other things, any arguments submitted in favor of or against the permanent base adjustment measure; and

WHEREAS the Town Clerk has placed a public notice in the *Daily Territorial*, notifying the public that arguments for and against the permanent base adjustment measure will be accepted by the Town Clerk no later than 5:00 P.M. on Wednesday, August 10, 2022; and

WHEREAS pursuant to A.R.S. § 41-563.03(D), the Town Council must transmit a copy of the printed publicity pamphlet to the Arizona Auditor General before the election; and

WHEREAS the Mayor and Council find it is in the best interests of the Town and its citizens to adopt this resolution.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF TOWN OF MARANA, ARIZONA, as follows:

SECTION 1. The Town Manager, Town Attorney, and Town Clerk are hereby directed and authorized to take such actions as are necessary or desirable to comply with all applicable laws and regulations relating to or necessary for the November 8, 2022 general election, including without limitation any and all activities related to the preparation,

transmission to the Arizona Auditor General, printing, and distribution of a publicity pamphlet as required by law, and to the execution of contracts necessary for the same.

SECTION 2. The Town Clerk is hereby authorized and directed to charge an amount of money to offset a portion of the proportionate cost of the paper and printing of the arguments received for and against the permanent base adjustment measure, as provided in A.R.S. §19-124(D), and in the Town's comprehensive fee schedule.

PASSED AND ADOPTED BY THE MAYOR AND COUNCIL OF THE TOWN OF MARANA, ARIZONA, this 3rd day of August, 2022.

Mayor Ed Honea

ATTEST:

Cherry L. Lawson, Town Clerk

APPROVED AS TO FORM:

Jane Fairall, Town Attorney

Council-Regular Meeting **C6**

Meeting Date: 08/03/2022

To: Mayor and Council

Submitted For: Cherry L. Lawson, Town Clerk

From: Cherry L. Lawson, Town Clerk

Date: August 3, 2022

Subject: Approval of the Council Special Meeting Summary Minutes of July 12, 2022 (Cherry L. Lawson)

Attachments

Council Special Meeting Summary Minutes, 07/12/2022

MARANA TOWN COUNCIL
SPECIAL COUNCIL MEETING

11555 W. Civic Center Drive, Marana, Arizona 85653
Council Chambers, July 12, 2022, at or after 6:00 PM

Ed Honea, Mayor
Jon Post, Vice Mayor
Patti Comerford, Council Member
Jackie Craig, Council Member
Herb Kai, Council Member
John Officer, Council Member
Roxanne Ziegler, Council Member

SUMMARY MINUTES

CALL TO ORDER AND ROLL CALL

Mayor Honea called the meeting to order at 6:00 PM and directed the Clerk to call the roll. **Mayor Honea, Vice Mayor Post, Council Members: Jackie Craig (Excused), Patti Comerford, Roxanne Ziegler, John Officer, and Herb Kai (Excused)**

PLEDGE OF ALLEGIANCE/INVOCATION/MOMENT OF SILENCE: Led by **Mayor Honea.**

APPROVAL OF AGENDA

Vice Mayor Post, moved and Council Member Officer second the motion approving the agenda as presented. Motion passes, 5-0.

PROCLAMATIONS

PR1 Proclamation recognizing the month of August as, "Child Support Awareness Month" (Cherry L. Lawson)

MAYOR AND COUNCIL REPORTS: SUMMARY OF CURRENT EVENTS

Council Member Comerford expressed her appreciation to Town staff for a fantastic July 4 Celebration, and commented on the current election season that it has become unpleasant in terms of behavior. She hopes this is coming from someone outside of Marana.

Council Member Officer commented on the work crew who are currently repaving the freeway that he met an intern who explained how the work would proceed. He was able to contact the intern's boss, complimented the work crew on their work on the freeway, as there has not been any disruptions to traffic flow. He greatly appreciates the work that has occurred on our freeway.

Council Member Ziegler expressed disagreement with **Council Member Comerford's** statement stating, that it is the sign of the times with the elections. She has not witnessed nastiness from the other three candidates, but that we are not angels either. She believes that it is a competition. **Council Member Comerford** replied stating that was not what she meant or was referring too. **Council Member Ziegler** apologized for her mis-statement.

She acknowledged **Deputy Public Works Director and Interim Town Engineer Fausto Burruel** and his employees who went into the La Porta Del Norte community to trim trees and clean in that community as well as the Linda Vista community. Members of those communities were very happy and thankful to the Town staff.

MANAGER'S REPORT: SUMMARY OF CURRENT EVENTS

Town Manager Terry Rozema reported on the following:

- Development Services issued 63 single-family housing permits for June, as of this day in July, 11 single-family housing permits have been issued;
- Star Spangle Spectacular was a phenomenal event; that approximately 10,000 - 12,000 people (inside the park) attended the event with several sponsors adding to the success of the event.
- Parks & Recreation has many programs for all ages in the community as well as use of the amenities within the community; more information on the programs are available on the Town's website;
- Marana Police Department remodel of its Dispatch Center is now a state of the art facility;
- Community Park at Saguaro Bloom status update, that it has sat dormant for some time. DR Horton completed the hardscape and parking, but are having difficulties in getting a structural contractor to complete the remaining work;
- Contract was finalized and signed today with Architekton, Inc. for the work on the Parks & Recreation Community and Aquatics Center;

- Roundabout projects within the community – Moore Road and Tortolita that will be completed August 5, and the Twin Peaks at Sandario roundabout that will be completed on July 30.

Mayor Honea stated that he would like to take a chairperson discretion to have a call to the public, as it is not on the agenda. Two individuals wished to make public comments. He open the meeting to receive public comments.

Robert Medler commented on the transmission lines that are proposed for the San Lucas community. He spoke of the board that will decide on the project and ask the Council to submit an objection within 30 days of the decision of the board to file a complaint, as it had not been cited correctly. He understands that the Town does not have an official roll on the decision. He mentioned a state statute that allows for intervention by the Town.

John Flint stated that six days ago the Governor signed SB168, which enhances government ability to regulate vacation rentals. He commented on how vacation rentals become a problem for communities, as homeowners do not want vacation rentals in their communities.

PRESENTATIONS

CONSENT AGENDA

C1 Resolution No. 2022-070: Relating to Development; approving a Final Plat for Marana Center III, Lots 2-10 located east of Interstate 10 and southeast of Twin Peaks Road (Steve Cheslak)

C2 Resolution No. 2022-071: Relating to Finance; approving and authorizing the Town Manager to execute an Intergovernmental Agreement between the Town of Marana and the City of Glendale for the use of the City of Glendale hosted and developed Glendale Tax Application (Yiannis Kalaitzidis)

C3 Resolution No. 2022-072: Relating to the Police Department; approving and authorizing the Mayor to execute an Intergovernmental Agreement between Pima County and the Town of Marana for payment for the incarceration of municipal prisoners for the period of July 1, 2022 through June 30, 2023 (Jane Fairall)

C4 Resolution No. 2022-073: Relating to the Water Department; approving and authorizing the submission of a grant application to the Bureau of Reclamation under the WaterSMART Grants: Water and Energy Efficiency Grants for Fiscal Year 2023 program and verifying certain information required under the program (Kristin Taft)

C5 Resolution No. 2022-074: Relating to Public Works; approving and authorizing the Mayor to sign a public improvement participation agreement with Mandarina South, LLC for the construction of Mandarina Drainage Upsizing improvements as part of the Tangerine Road widening project (Jane Fairall)

C6 Approval of the Council Study Session Meeting Minutes of June 28, 2022, the Regular Council Meeting Minutes of June 21, 2022, and the Special Council Meeting Minutes of June 21, 2022, (Cherry L. Lawson)

Vice Mayor Post, moved and Council Member Ziegler second the motion approving the Consent Agenda as presented. Motion passes, 5-0.

LIQUOR LICENSES

L1 Relating to Liquor Licenses; recommendation to the Arizona Department of Liquor Licenses and Control regarding an application for a new series #010 Beer and Wine Store Liquor License submitted by Brenda E. Sallard on behalf of Family Dollar #27696, located at 11825 West Grier Road, Marana, AZ 85653 (Cherry L. Lawson)

Town Clerk Cherry Lawson provided an overview of the application for a new series #010 Beer and Wine Store Liquor License submitted by Brenda E. Sallard on behalf of Family Dollar #27696, located at 11825 West Grier Road, Marana, AZ 85653. She indicated that the application was processed, posted as well as having been reviewed by town departments. She asked that Council approve an order recommending approval be submitted to the DLLC for this liquor license application.

Council Member Ziegler moved and Vice Mayor Post second the motion to approve and submit to the DLLC an order recommending approval of an application for a new series #010 Beer and Wine Store Liquor License submitted by Brenda E. Sallard on behalf of Family Dollar #27696, located at 11825 West Grier Road, Marana, AZ 85653. Motion passes, 5-0.

BOARDS, COMMISSIONS AND COMMITTEES

COUNCIL ACTION

A1 PUBLIC HEARING: Ordinance No. 2022.010: Relating to Development; approving a modification of a rezoning condition of Marana Ordinance No. 2014.026, which created the Riverside at Silverbell Specific Plan, to delete a provision of the ordinance that required the developer to design and construct eastbound right-turn (deceleration) lanes at each of the project's three driveways on Ina Road (Jane Fairall)

[6:21 PM Minutes] Mayor Honea opened the public hearing to receive testimony on this item.

Town Attorney Jane Fairall provided an overview of this item stating is to delete a rezoning condition that was included in Ordinance 2014.026 that created the Riverside at Silverbell Specific Plan. The southeast corner of Ina Road and Silverbell where Circle K is located, and is east of the Circle K. The rezoning condition require that the developer had to design and construct an eastbound right turn deceleration as well as lanes at each of the properties driveway entrances off of Ina Road. At this point Ascent Companies intends to develop a portion of that property of apartments named Amavida Apartments. They had submitted new traffic impact statements as was required by the 2014 Ordinance.

In January 2022, the new traffic impact statement shows that those three (3) lanes are no longer warranted based on the changes in land use and intensities in the area. Ascent has applied to have that rezoning condition deleted. If the Council approves this item, the Town would bind Ascent to the new traffic impact statement as well as any additional traffic studies.

[6:21 PM Minutes] Mayor Honea closed the public hearing. There were no comments.

Council Member Ziegler moved and Vice Mayor Post second the motion approving Ordinance No. 2022.010. Motion passes, 5-0.

ITEMS FOR DISCUSSION/POSSIBLE ACTION

D1. Relating to Legislation and Government Actions; discussion and possible action regarding all pending state, federal, and local legislation/government actions and on recent and upcoming meetings of the other governmental bodies (Terry Rozema)

Mr. Rozema reported that the state legislative session has ended, and the Town will have TriAdvocates to provide a report to Council during the first meeting in August. He provided some highlights to the approved budget.

EXECUTIVE SESSIONS

Pursuant to A.R.S. § 38-431.03, the Town Council may vote to go into executive session, which will not be open to the public, to discuss certain matters.

E1. Executive Session pursuant to A.R.S. §38-431.03 (A), Council may ask for discussion or consideration, or consultation with designated Town representatives, or consultation for legal advice with the Town Attorney, concerning any matter listed on this agenda for any of the reasons listed in A.R.S. §38-431.03 (A).

FUTURE AGENDA ITEMS

Notwithstanding the Mayor's discretion regarding the items to be placed on the agenda, if three or more Council members request that an item be placed on the agenda, it must be placed on the agenda for the second regular Town Council meeting after the date of the request, pursuant to Marana Town Code Section 2-4-2(B).

ADJOURNMENT

Mayor Honea asked for a motion to adjourn the meeting.

Vice Mayor Post, moved and Council Member Ziegler second the motion to adjourn the meeting. Motion passes, 5-0. Meeting adjourned at 6:23 PM.

CERTIFICATION

I hereby certify that the foregoing are the true and correct minutes of the Marana Town Council Special Meeting held on July 12, 2022. I further certify that a quorum was present.

_____

Cherry L. Lawson, Town Clerk

DRAFT

Council-Regular Meeting **A1**

Meeting Date: 08/03/2022

To: Mayor and Council

Submitted For: Libby Shelton, Deputy Town Attorney

From: Libby Shelton, Deputy Town Attorney

Date: August 3, 2022

Strategic Plan Focus Area:
Not Applicable

Subject: PUBLIC HEARING: Ordinance No. 2022.011: Relating To Transaction Privilege Tax; amending Marana Ordinance No. 2021.022 to exempt the sale of Manufactured Buildings, pursuant to Town Tax Code Section 8-427, from the one-half cent tax increase approved by Ordinance No. 2021.022; and designating an effective date (Yiannis Kalaitzidis)

Discussion:

At the October 19, 2021 Council Meeting, Town Council approved Ordinance No. 2021.022 amending the Town Tax Code by increasing the tax rate on certain activities by one-half cent for the design and construction, and fixtures, furniture and equipment, for a new Multi-generational Community Center and Aquatic Center.

Ordinance 2021.022 provides that certain classifications are exempt from the transaction privilege tax rate increase. The exempted classifications are:

- Construction Contracting under Town Tax Code Sections 8-415, 8-416, 8-417
- Hotel/Motel – Additional Tax under Town Tax Code Section 8-447
- Mining under Town Tax Code Section 8-432
- Telecommunication Services under Town Tax Code Section 8-470
- Utility Services under Town Tax Code Section 8-480

Ordinance 2021.022 did not exempt manufactured buildings, under Town Tax Code Section 8-427, from the tax increase. Ordinance 2021.022 also adopted Local Option V

of the Model City Tax Code to impose an alternate tax structure on sales/purchases of "big ticket" items and kept the lower tax rate of 2% for any single item purchase over $5,000. Under the current Town Tax Code, manufactured buildings would not qualify as a "big ticket" item because they are not "tangible personal property" for application of the retail sales tax. Thus, manufactured buildings do not qualify for the lower tax rate of 2% as a "big ticket" item. Since manufactured buildings were not included in the exemptions and also would not qualify for the lower tax rate of 2% under the current Town Tax Code, Town staff is recommending manufactured buildings be added to the exemptions and thereby taxed at the lower rate of 2%.

After the public hearing this evening, staff is seeking Council's consideration of the proposed ordinance which amends Ordinance 2021.022 to exempt the sale of Manufactured Buildings, pursuant to Town Tax Code Section 8-427, from the one-half cent tax increase. Should the ordinance be approved, Staff will provide notice to the Municipal Tax Code Commission and the Arizona Department of Revenue within 10 days of approval (A.R.S. §42-6052(I)).

Financial Impact:

The financial impact of excluding manufactured buildings from the one-half cent tax is anticipated to be immaterial when compared to overall tax collections and can be absorbed through other revenue variances. If approved, however, the exemption provided may increase interest for consumers to "shop local" for Manufactured Buildings in Marana and thereby support businesses in our community.

Staff Recommendation:

Staff recommends approval of the proposed Ordinance.

Suggested Motion:

I move to adopt Ordinance 2022.011, amending Marana Ordinance No. 2021.022 to exempt the sale of manufactured buildings, pursuant to Town Tax Code Section 8-427, from the one-half cent tax increase approved by Ordinance No. 2021.022 and designating an effective date.

Attachments

Ordinance No. 2022.011

MARANA ORDINANCE NO. 2022.011

RELATING TO TRANSACTION PRIVILEGE TAX; AMENDING MARANA ORDINANCE NO. 2021.022 TO EXEMPT THE SALE OF MANUFACTURED BUILDINGS, PURSUANT TO TOWN TAX CODE SECTION 8-427, FROM THE ONE-HALF CENT TAX INCREASE APPROVED BY ORDINANCE NO. 2021.022; AND DESIGNATING AN EFFECTIVE DATE

WHEREAS A.R.S. §42-6002 provides a procedure for the levy of transaction privilege taxes by a city or town; and

WHEREAS A.R.S. §9-240 provides that the Town Council shall have control of the finances of the town; and

WHEREAS the Town Council has adopted the Model City Tax Code as defined by A.R.S. §42-6051; and

WHEREAS the Town Council adopted title 8 of the Marana Town Code, adopting the tax code of the Town of Marana ("Town Tax Code") and any amendments to it via Ordinance No. 96.03, which has been amended from time to time; and

WHEREAS the Town Council adopted Ordinance No. 2021.022 on October 19, 2021, amending the Town Tax Code by increasing the tax rate on certain activities by one-half cent to fund the new multi-generational Community Center and Aquatic Center; and

WHEREAS Section 1 of Ordinance No. 2021.022 exempted several enumerated activities from the one-half cent tax increase; and

WHEREAS the Town Council finds that it is in the best interests of the community to amend Ordinance No. 2021.022 to exempt the sale of manufactured buildings pursuant to Marana Tax Code Section 8-427 from the one-half cent tax increase.

BE IT ORDAINED BY THE MAYOR AND COUNCIL OF THE TOWN OF MARANA, as follows:

Section 1. Section 1 of Marana Ordinance No. 2021.022 is hereby amended to add the sale of manufactured buildings under Town Tax Code Section 8-427 to the list of activities exempted from the one-half cent tax increase.

Section 2. The various Town officers and employees are authorized and directed to perform all acts necessary or desirable to give effect to this ordinance.

Section 3. All ordinances, resolutions, or motions and parts of ordinances, resolutions, or motions of the Council in conflict with the provisions of this ordinance are hereby repealed, effective as of the effective date of this ordinance.

Section 4. If any section, subsection, sentence, clause, phrase, or portion of this ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, the decision shall not affect the validity of the remaining portions of this ordinance.

Section 5. This ordinance shall become effective on November 1, 2022.

PASSED AND ADOPTED BY THE MAYOR AND COUNCIL OF THE TOWN OF MARANA, ARIZONA, this 3rd day of August, 2022.

_____
Mayor Ed Honea

ATTEST:

_____
Cherry L. Lawson, Town Clerk

APPROVED AS TO FORM:

_____
Jane Fairall, Town Attorney

Council-Regular Meeting **A2**

Meeting Date: 08/03/2022

To: Mayor and Council

Submitted For: Fausto Burruel, Public Works Deputy Director

From: Fausto Burruel, Interim Public Works Director

Date: August 3, 2022

Strategic Plan Focus Area:
Not Applicable

Subject: PUBLIC HEARING: Relating to Development; public hearing regarding Land Use Assumptions and Infrastructure Improvements Plans related to the Town's 2022 Development Impact Fees for Roads, Parks, Water, and Wastewater Capital Infrastructure (Fausto Burruel)

Discussion:

Town staff is currently working to update the Town's Development Impact Fees for Streets, Parks, Water, and Wastewater, in compliance with A.R.S. §9-463.05. Draft reports for Land Use Assumptions and Infrastructure Improvements Plans were posted on the Town website on May 12, 2022.

The Town last updated its impact fees in 2017. New infrastructure needs related to newly revised Land Use Assumptions and growth projections have necessitated the review and update to all of the Town's impact fees.

Tonight's Public Hearing will provide the public the ability to comment on the Town's new growth projections and projects proposed to meet the infrastructure needs of our growing community.

Staff Recommendation:

None.

Suggested Motion:
None - Public Hearing only.

Attachments

2022 Land Use Assumptions
Draft Streets IIP
Draft Parks IIP
Draft Water IIP
Draft Sewer IIP

Town of Marana

Impact Fee Study

Land Use Assumptions

Public Report

DRAFT

Prepared by

PSOMAS

333 East Wetmore Road, Suite 450
Tucson, AZ 85705

Prepared for

MARANA AZ

11555 West Civic Center Drive
Marana, AZ 85653

Psomas Project No. 7TMA150123

March 2022

Town of Marana Mayor and Council

Ed Honea – Mayor

Jon Post – Vice Mayor

Patti Comerford – Councilmember

Herb Kai – Councilmember

Roxanne Ziegler – Councilmember

John Officer – Councilmember

Jackie Craig - Councilmember

Key Staff

Terry Rozema, Town Manager

Keith Brann, P.E., CFM, Town Engineer and Project Director

Steve Cheslak, Town Planner II

Jane Fairall, Town Attorney

Fausto Burruel, P.E., Public Works Deputy Director

Project Consultants

Psomas

333 East Wetmore Road, Suite 450

Tucson, AZ 85705

520-292-2300

Prime Consultant – All Tasks

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1. INTRODUCTION

The Town of Marana collects development impact fees to offset some of the infrastructure costs associated with growth. The Town currently charges fees for roads, parks, and wet utilities and intends to continue doing so. In order to continue the fees, the Town must comply with Arizona Revised Statute (ARS) §9-463.05. In so doing, the Town will be preparing new development impact fee studies, project lists, and fee schedules.

The statute limits the types of "necessary public services" which impact fees can fund. A municipality must develop two preliminary products prior to calculating the fees for each service category: a set of land use assumptions and an infrastructure improvement plan (IIP).

As defined in ARS §9-463.05(T)6, "'Land use assumptions' means projections of changes in land uses, densities, intensities and population for a specified service area over a period of at least ten years and pursuant to the general plan of the municipality."

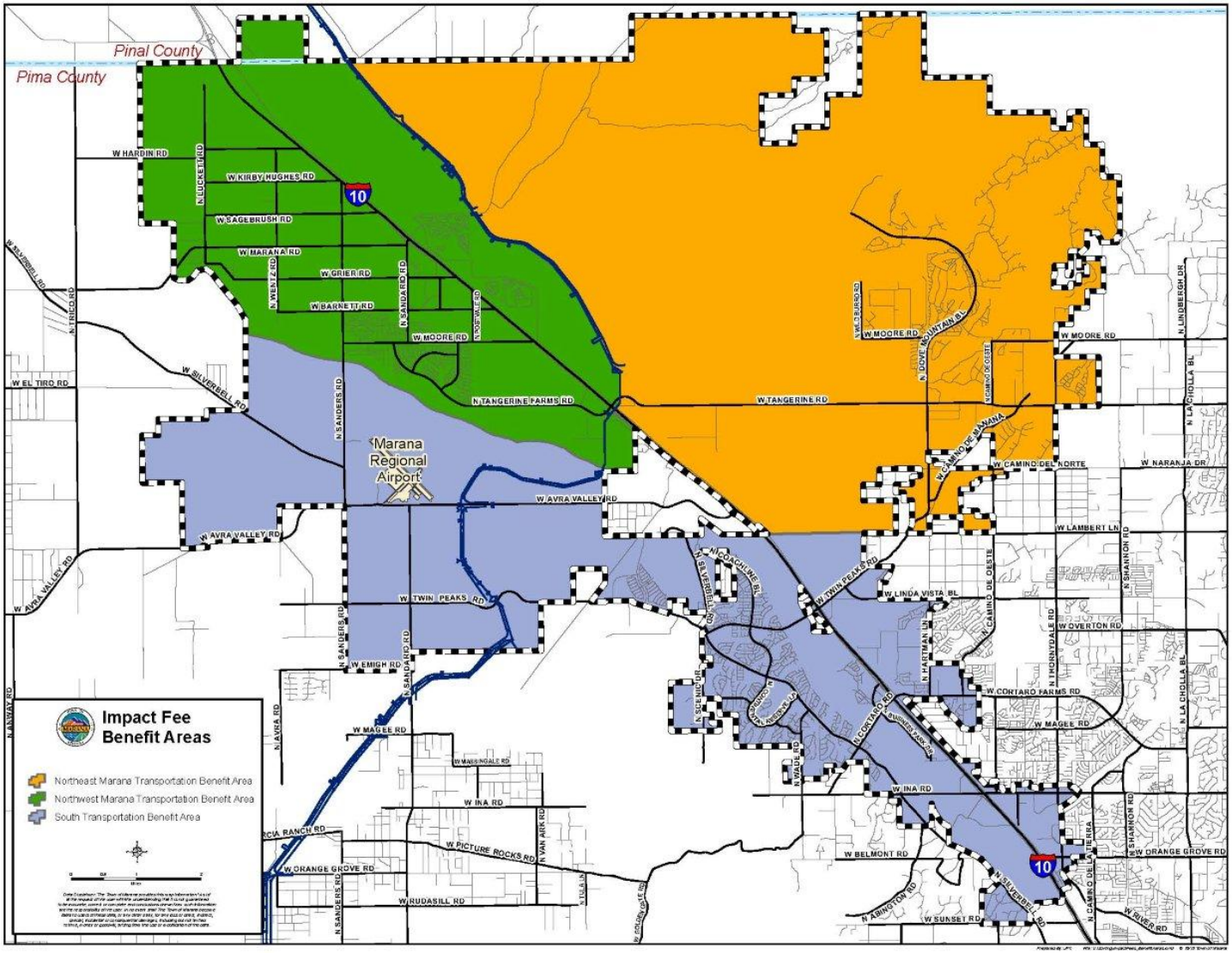
This report is a required document that identifies the land use assumptions to be applied in the IIPs for streets, parks, and wet utilities, and the subsequent calculation of development impact fee rates. These land use assumptions are used to estimate the amount of new development within the benefit areas from which development impact fees will be assessed and generally reflect the community's general plan and the region's official suballocation of population forecast to the municipality.

1.1. ALLOCATION OF GROWTH WITHIN SERVICE AREAS

A "service area" is defined in ARS §9-463.05 (T)9 as "any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services of facility expansions and the development being served as prescribed in the infrastructure improvement plan."

The Town will continue to use the current service areas, which are shown in Figure 1. The park service area includes the entire Town, and the wet utilities are those areas serviced by Marana Water or by Tucson Water when Marana is required to provide water credits.

Figure 1. Streets Service Areas and Parks Service Area (Town Limits)



2. EXISTING SOCIOECONOMIC CONDITIONS

2.1. POPULATION AND HOUSING

Marana continues to grow faster than the state as a whole. The general population and housing information shown in Table 1 was collected from the US Census Bureau[1].

Table 1. Population and Housing Units Census Data

	Marana	Arizona
Population, 2019 estimate	49,030	7,278,717
Population, 2010 (April 1) estimates base	34,556	6,392,288
Population, percent change, April 1, 2010 to July 1, 2015 9	41.9%	13.9%
Housing units, 2019	21,521	3,075,981
Homeownership rate, 2015-2019	79.4%	64.4%
Median value of owner-occupied housing units, 2015-2019	$252,100	$225,500
Households, 2015-2019	16,539	2,571,268
Persons per household, 2011-2015	2.70	2.68

2.2. EMPLOYMENT

Marana also has a higher employment rate than the state as a whole. The 2019 employment data in Table 2 was obtained from the US Census Bureau[2].

Table 2. 2019 Employment Data

Employment Status	Marana		Arizona	
	Estimate	Percent	Estimate	Percent
Population 16 years and over	35,209	-	5,820,607	-
In labor force	20,811	59.1%	3,506,306	60.2%
Civilian labor force	20,632	58.6%	3,482,170	59.8%
Employed	19,742	56.1%	3,305,302	56.8%
Unemployed	890	2.5%	176,868	3.0%
Armed Forces	179	0.5%	24,136	0.4%
Not in labor force	14,398	40.9%	2,314,301	39.8%
Civilian labor force	20,632	-	3,482,170	-
Percent Unemployed	-	4.3%	-	5.1%

3. EXISTING (2022) SOCIOECONOMIC CONDITIONS – PAG-ASSISTED MODEL

As part of the update to the streets IIP, Psomas assisted the Pima Association of Governments (PAG) with refining the existing regional model and developing a travel demand model based on existing and projected socioeconomic conditions for use in this study.

PAG maintains a model of existing conditions as well as a model representing the regional transportation network incorporating the planned 5-year Transportation Improvement Program (TIP) projects (currently through 2026). PAG provided both models as well as socioeconomic data for each Transportation Analysis Zone (TAZ) in the region for each model. The data included population and employment estimates. For the existing population and employment data for the TAZs within and surrounding the Marana impact fee service areas, proposed refinements were suggested to represent the impact fee service areas. These refinements were developed in concert with the Town and included updating population and/or employment for the TAZs to produce an updated model of existing conditions for the region for use in this project.

In addition, because 2021 and the early part of 2022 saw significant growth in the Town, the volumes in the existing model were adjusted upward to account for the growth through the end of 2022.

4. LAND USE ASSUMPTIONS

The land use assumptions are based on the current Town General Plan, as required by the statute. These are shown in Table 3.

The land use assumptions include the estimated build out number of residential units and the estimated non-residential commercial acres. This was done to show the percentage of each development that is estimated to be constructed and eligible for inclusion in the IIP which is developed for a 10-year planning horizon. The 10-year period will begin January 1, 2023; therefore, December 31, 2032 would be the planning horizon. The land use assumptions are provided for the area within the existing Town limits and also within areas that are projected to be annexed within the 10-year period.

Table 3. Marana Land Use Assumptions

Development	Buildout Residential Units	Buildout Commercial Acres	Existing and 10 Year Growth				Current Streets Impact Fee Area
			Existing Residential Units*	10 Year Residential Units	Existing Commercial Acres*	10 Year Commercial Acres	
AERIE APARTMENTS (Phase 3)	400	0	400	0	0	0	South
AIRPORT	0	10	0	0	50	10	South
ALEXANDER SP APARTMENTS (MU)	211	3	211	0	3	3	South
BREAKERS RD INDUSTRIAL	0	40	0	0	40	40	Northeast
CONTINENTAL RANCH (MU)	0	6	0	0	26	6	South
CORTARO RANCH (Commercial)	0	9	0	0	9	9	South
CROSSROADS AT GLADDEN	0	122	0	0	168	122	Northwest
CUSTOM HOMES	0	0	0	60	0	0	Northeast
CUSTOM HOMES (Marana Water)	0	0	0	30	0	0	Northeast
CYPRESS GARDENS	217	0	0	217	0	0	Northwest
DE ANZA	265	0	115	150	0	0	South
DOVE MOUNTAIN (MU)	9,159	0	5,197	1,800	105	0	Northeast
GLADDEN FARMS (Commercial)	0	0	0	0	22	0	Northwest
GLADDEN FARMS II	2,539	0	950	1,589	0	0	Northwest
HERITAGE PARK SHOPPES	0	9	0	0	18	9	Northwest
JOPLIN ESTATES (MU)	185	0	0	185	18	0	South
LA PUERTA DEL NORTE EAST	150	0	0	150	0	0	South
LAZY K	178	0	178	0	0	0	South
LINDA VISTA VILLAGE (MU)	693	0	0	693	26	0	South
MANDARINA (MU)	2,500	0	0	1,650	11	0	Northwest
MANDARINA SOUTH (MU)	750	20	0	250	20	20	Northwest
MARANA & I10 (Dahlstrom Commercial)	0	28	0	0	37	28	Northwest
MARANA MAIN ST. (Commecial)	0	10	0	0	20	10	Northwest
MARANA SPECTRUM/CENTER (MU)	275	87	275	0	87	87	South
MARANA TECHNOLOGY CAMPUS	0	9	0	0	9	9	Northeast
MARANA TOWNE CENTER (MU)	2,200	30	0	0	462	30	Northwest

Table 3 cont'd. Marana Land Use Assumptions

Development	Buildout Residential Units	Buildout Commercial Acres	Existing and 10 Year Growth				Current Streets Impact Fee Area
			Existing Residential Units*	10 Year Residential Units	Existing Commercial Acres*	10 Year Commercial Acres	
ORANGE GROVE INDUSTRIAL (Commercial)	0	3	0	0	5	3	South
PAYSON FARMS (Remington Ranch)	457	0	0	457	0	0	Northwest
PIMA FARMS NORTH (Commercial)	700	1	480	200	1	1	South
PRESERVE AT TWIN PEAKS (Lennar)	190	0	140	50	0	0	Northeast
QUIKTRIP PLAZA @ Star Commerce (Commercial)	0	6	0	0	6	6	South
RANCHO MARANA - West (MU)	516	1	366	150	5	1	Northwest
RANCHO MARANA TOWN CENTER (Commercial)	0	5	0	0	41	5	Northwest
RIVERSIDE @ SILVERBELL (SE INA/SB) (MU)	210	0	0	210	12	0	South
SAGUARO BLOOM	2,509	0	1,809	700	0	0	South
SAGUARO RANCH	240	0	15	50	0	0	Northeast
SANDERS GROVE	2,500	0	0	700	0	0	Northwest
SILVERBELL GATEWAY (NE INA/SB) (Apts) (MU)	300	0	300	0	0	0	South
SILVERBELL RIDGE (SW of Ina)	56	0	0	56	0	0	South
SONORAN PRESERVE at BAJADA	29	0	15	14	0	0	Northeast
STONEGATE	3,138	0	0	1,000	0	0	Northwest
TANG THORNYDALE SW CORNER REZONE(MU)	250	0	0	250	15	0	Northeast
TANGERINE BUSINESS PARK (Commercial)	0	7	0	0	40	7	Northeast
TANGERINE COMMERCE PARK	0	30	0	0	47	30	Northwest
TANGERINE CROSSING Fry's (Commercial)	0	3	0	0	3	3	Northeast
TANGERINE THORNYDALE (Villagio, HSL) (MU)	107	0	0	107	2	0	Northeast
TAPESTRY	670	0	0	600	0	0	Northeast
TORTOLITA 30 REZONE	82	0	42	40	0	0	Northeast
TORTOLITA VISTAS	155	0	115	40	0	0	Northeast
TWIN PEAKS & LAMBERT	62	0	62	0	0	0	Northeast
TWIN PEAKS CROSSING (Cardinal)(MU)	154	0	0	154	25	0	Northeast
TAVIRA AT TWIN PEAKS ESTATES	82	0	0	82	0	0	Northeast

Table 3 cont'd. Marana Land Use Assumptions

Development	Buildout Residential Units	Buildout Commercial Acres	Existing and 10 Year Growth				Current Streets Impact Fee Area
			Existing Residential Units*	10 Year Residential Units	Existing Commercial Acres*	10 Year Commercial Acres	
TWIN PEAKS RD (Future rezones)	100	0	0	100	0	0	Northeast
TWIN PEAKS VISTA	58	0	0	58	0	0	Northeast
UPTOWN	930	0	0	300	0	0	Northwest
VANDERBILT FARMS (MU)	1,945	0	224	1,500	0	0	Northwest
VILLAGES OF BARNETT	251	0	81	50	0	0	Northwest
Villages of Tortolita	6,500	0	0	300	0	0	Northwest
WHITNEY FARMS	12	0	12	0	0	0	Northwest
Total				**13,942**		**439**	
Average Growth per Year				**1,394**		**44**	

*Existing residential units and existing commercial acres are an etimated projection for the winter of 2022, the anticipated effective data of a new impact fee cycle.

5. 2031 Conditions With Land Use Assumptions

The land use assumptions were provided to the PAG travel demand modeling staff. Psomas estimated 2022 and 2032 socioeconomic population and employment projections by TAZ and compared them with the PAGs socioeconomic parameters (population and employment). The project team met with PAG staff to discuss their findings, including suggested refinements of some of the TAZ boundaries, and to request a special model run for the project based on the Psomas projections.

The 2032 socioeconomic conditions were estimated using data from the PAG 2021 model and adding the projects in the Land Use Assumptions (if they were not already represented in the model). For residential developments, population was calculated assuming an average 2.5 persons per unit. This assumption was applied based on the existing PAG model, which showed that for the Marana TAZs, there are an average of 2.5 persons/residence. Slight variations were used based on the location and type of residential development to remain consistent with the persons per household information available in the PAG model for various TAZs.

The commercial development assumptions and employment estimates are based on analysis conducted for the Marana Town Center study and information provided by PAG, shown in Table 4.

Table 4. Commercial Development Assumptions

	% Acres to include buildings	# sq ft per employee
Retail	20%	600
High Traffic Retail	20%	200
Office	20%	400
Industrial	20%	500
Hotel	20%	1,800

After the population and employment numbers were calculated for 2031 for each of the proposed projects in the Town of Marana, those values were assigned to the TAZ(s) in which the project is expected to be located. The population and employment numbers were then compared to the corresponding values provided in the PAG 2030 model.

The higher of the two values for each affected TAZ was used for the 2031 model to ensure that all of the planned projects in the Town were accounted for in the 2031 model. Additional adjustments were made to better represent 2022 and 2032 conditions after the models were run due to the significant growth in the Town in 2021 and the expected growth through 2022.

A summary of the population and employment estimates for 2022 and 2032 conditions and the increases in each are shown in Table 5. The population and employment numbers by TAZ and the TAZ/Service Areas map are provided in the appendix. It should be noted that the population and employment estimates in the appendix differ from Table 5 because some areas located outside the Town are included in several of the TAZs. The estimated future population of 88,347 in 2032 is somewhat similar to the Arizona State Demographers forecast[3] of 69,627. Most likely, the estimated future population is higher than the State forecast because of unexpected significant increases in residential and commercial development during the COVID-19 pandemic, and expected continuation of that accelerated growth.

Table 5. Socioeconomic Totals (2022 – 2032)

	2022		2032		Increase	
	Employees	Population	Employees	Population	Employees	Population
Northwest	2,130	11,100	3,737	26,290	1,607	15,190
Northeast	1,415	13,047	2,526	24,764	1,111	11,718
South	10,747	30,786	13,194	37,292	2,447	6,506
Townwide Totals	**14,292**	**54,932**	**19,457**	**88,347**	**5,165**	**33,414**

6. REFERENCES

[1] https://www.census.gov/quickfacts/fact/table/maranatownarizona,AZ/HSG010219#qf-flag-X, accessed November 2021.

[2] https://data.census.gov/cedsci/table?q=arizona%20employment&tid=ACSDP1Y2019.DP03, accessed November 2021.

[3] https://www.azcommerce.com/oeo/population/population-projections/, accessed November 2021.

Appendix A
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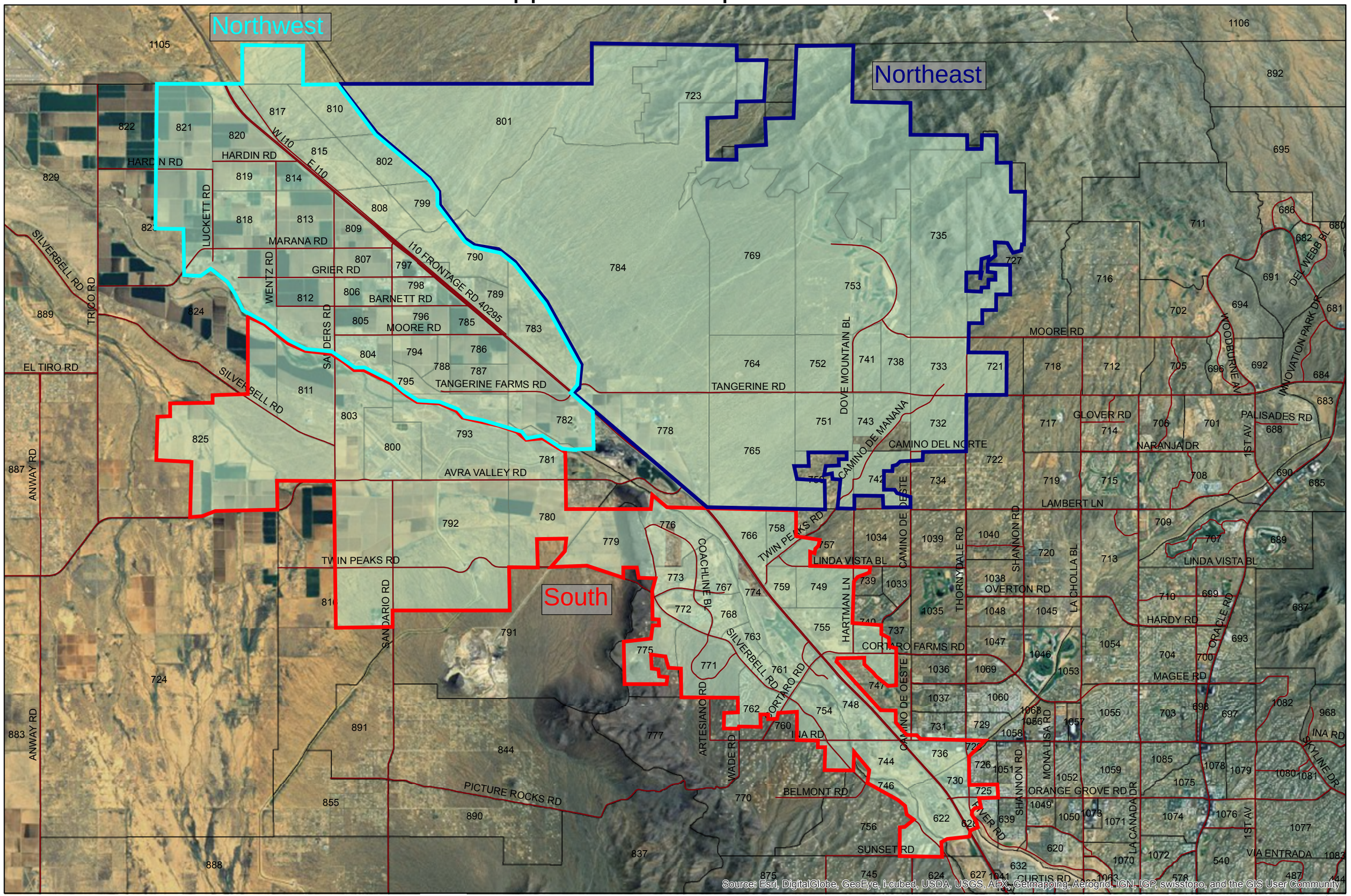
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Appendix B - Map of TAZs



Appendix C

Population and Employment by TAZ

Northwest Benefit Area						
TAZ	2022		2032		Increase	
	Employees	Population	Employees	Population	Employees	Population
782	312	168	9,468	169	9,156	1
783	0	0	2,500	3,846	2,500	3,846
785	0	0	0	0	0	0
786	0	1,102	9	1,102	9	0
787	0	981	0	981	0	0
788	14	1,249	156	1,542	142	292
789	0	313	8	2,410	8	2,097
790	90	861	93	1,126	3	265
794	58	1,808	58	2,714	0	906
795	0	0	1	69	1	69
796	0	616	4	3,898	4	3,281
797	198	198	438	198	240	0
798	1,383	551	1,488	551	105	0
799	0	315	0	1,064	0	749
802	0	0	0	0	0	0
804	11	1,011	13	942	2	-69
805	0	832	15	2,299	15	1,467
806	37	684	50	812	13	128
807	38	3	99	3	61	0
808	0	285	0	285	0	0
809	0	0	3,232	461	3,232	461
810	0	0	0	0	0	0
812	18	13	96	13	78	0
813	0	0	0	1,076	0	1,076
814	0	0	0	598	0	598
815	0	0	0	0	0	0
817	0	0	0	0	0	0
818	62	81	62	81	0	0
819	6	17	6	17	0	0
820	7	0	7	0	0	0
821	0	2	0	2	0	0
823	10	22	10	23	0	1
824	59	229	59	306	0	77
TOTALS	**2,303**	**11,342**	**17,872**	**26,586**	**15,569**	**15,245**

South Benefit Area						
TAZ	2022		2032		Increase	
	Employees	Population	Employees	Population	Employees	Population
622	69	3	117	9	48	6
628	639	999	653	1,146	14	147
725	318	970	320	1,318	2	348
728	401	0	401	0	0	0
729	478	959	487	962	9	3
730	1,539	0	1,979	0	440	0
731	837	1,810	852	1,860	15	50
736	1,401	1,687	1,401	2,320	0	633
737	115	2,113	115	2,119	0	6
739	0	1,727	26	1,742	26	15
740	100	1,541	102	1,683	2	142
744	193	0	206	541	13	541
746	0	40	10	47	10	7
747	144	1,887	169	2,010	25	123
748	2,982	21	3,243	19	261	-2
749	15	1,205	18	2,374	3	1,169
754	172	0	433	410	261	410
755	71	864	313	941	242	77
756	12	858	19	1,084	7	226
757	0	531	82	595	82	64
758	1	207	1	200	0	-7
759	803	607	1,787	423	984	-185
760	79	1,067	82	1,499	3	432
761	366	1,448	367	1,503	1	55
762	18	953	21	1,048	3	96
763	17	1,272	17	1,361	0	89
766	0	0	4	0	4	0
767	15	1,374	15	1,303	0	-71
768	214	2,123	214	1,979	0	-144
770	125	791	129	939	4	148
771	444	4,450	444	4,450	0	0
772	164	2,627	665	3,044	501	418
773	13	1,228	13	1,911	0	683
774	910	866	960	1,697	50	831
775	55	1,610	55	1,013	0	-597
776	0	1,065	11	1,357	11	292
777	26	272	26	289	0	17
779	9	3,731	12	4,683	3	952
780	37	241	44	698	7	457
781	45	0	45	0	0	0
791	50	61	51	61	1	0
792	0	0	0	0	0	0
793	0	0	56	0	56	0
800	68	0	152	0	84	0
803	16	3	60	3	44	0
811	85	473	85	473	0	0
816	199	400	199	620	0	220
825	35	49	35	49	0	0
TOTALS	**13,280**	**44,134**	**16,495**	**51,782**	**3,215**	**7,648**

Northeast Benefit Area						
TAZ	**2022**		**2032**		**Increase**	
	Employees	**Population**	**Employees**	**Population**	**Employees**	**Population**
721	416	831	460	833	44	2
723	0	0	0	0	0	0
727	31	336	31	354	0	18
732	4	692	5	1,897	1	1,205
733	45	209	45	508	0	299
734	27	315	28	318	1	3
735	1	261	1	2,447	0	2,186
738	11	1,560	11	2,437	0	877
741	166	1,132	166	2,324	0	1,192
742	0	555	11	756	11	201
743	16	469	20	1,105	4	636
750	2	513	3	763	1	250
751	0	0	0	0	0	0
752	1	1,044	1	1,468	0	424
753	625	4,832	692	7,918	67	3,086
764	0	0	0	0	0	0
765	0	0	0	0	0	0
769	56	1,564	57	2,370	1	806
778	167	103	1,180	198	1,013	95
784	145	123	145	872	0	749
801	0	0	0	0	0	0
TOTALS	**1,713**	**14,539**	**2,858**	**26,568**	**1,145**	**12,029**

TAZ Totals	**2022**		**2032**		**Increase**	
	Employees	**Population**	**Employees**	**Population**	**Employees**	**Population**
	17,296	70,015	37,225	104,936	19,929	34,922

Town Totals	**2022**		**2032**		**Increase**	
	Employees	**Population**	**Employees**	**Population**	**Employees**	**Population**
	14,292	54,932	19,457	88,347	5,165	33,414

Town of Marana

Impact Fee Study

Streets Facilities

Infrastructure Improvements Plan

Public Report

DRAFT

Prepared by

PSOMAS

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Tucson, AZ 85705

Prepared for

MARANA AZ

CELEBRATING 40 YEARS

11555 West Civic Center Drive

Marana, AZ 85653

Psomas Project No. 7TMA150123

April 2022

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1. INTRODUCTION

The Town of Marana collects development impact fees to help offset some of the infrastructure costs associated with growth, as many jurisdictions do. In order to continue charging impact fees, the Town must comply with Arizona Revised Statute (ARS) §9-463.05, which includes the preparation of development fee studies, project lists, and fee schedules. Prior to establishing fees, a land use assumptions document and an infrastructure improvement plan (IIP) must be prepared.

This report identifies the infrastructure needs for the street facilities in the Town. The analysis only includes arterials and major collectors, since roadways with lower classifications are generally internal to development and are constructed during the development process. This analysis will be used in the subsequent calculation of impact fee rates. This report is an update of the Streets Facilities IIP approved and adopted by Town Council action in September 2017.

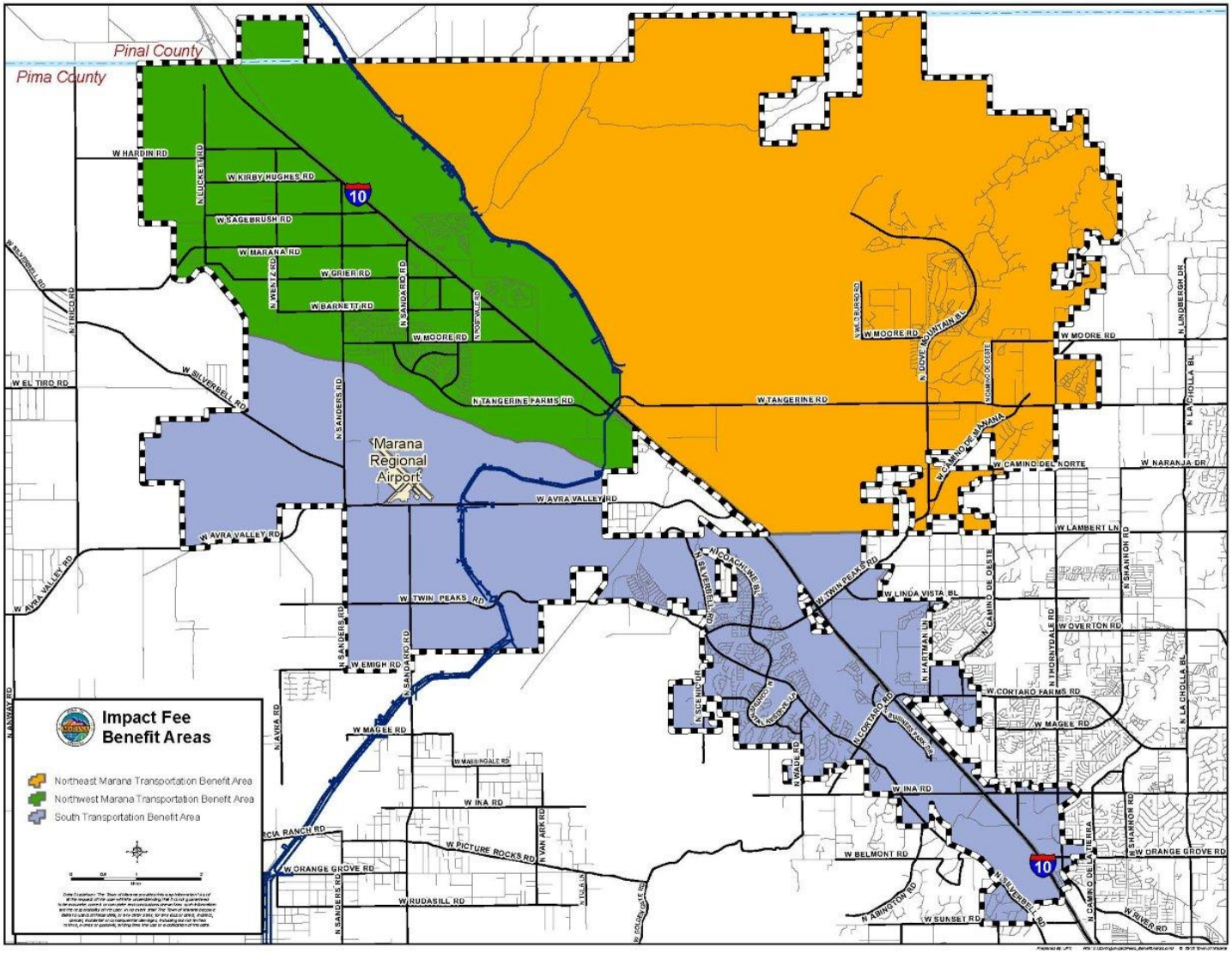
The land uses that are used in this report to evaluate infrastructure needs are documented separately in the Land Use Assumptions report developed by the Town of Marana. The Land Use Assumptions report provides a quantification of expected future development within each of the service areas for which impact fees will be assessed.

1.1. ALLOCATION OF GROWTH WITHIN SERVICE AREAS

A “service area” is defined in ARS §9-463.05 (T)9 as “any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services of facility expansions and the development being served as prescribed in the infrastructure improvement plan.”

The Town of Marana currently has three service areas for streets: Northeast, Northwest, and South. The Town will continue to use the current service areas, which are shown in Figure 1.

Figure 1. Streets Facilities Service Areas



2. NECESSARY PUBLIC SERVICES

2.1. EXISTING NEEDS

For each necessary public service for which impact fees will be used, this document shall include the following:

Per ARS §9-463.05(E)1:

- "A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."

Per ARS §9-463.05(E)2:

- "An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."

The Town of Marana has identified the roadway projects which will be included in the development fee study as necessary public services. These projects, shown in Table 1, are necessary mainly due to the expected growth which was documented in the Land Use Assumptions report. The table includes the costs for all projects as well as the total costs for new/improvement projects and for legacy projects.

Based on the 10-year framework required by the ARS, the analysis years include 2023 through 2032. The roadway projects for that period include 70.8 lane-miles of new and improved roadways, three traffic interchanges along Interstate 10 (at Twin Peaks Road, Tangerine Road, and Marana Road), and 50.6 lane-miles of legacy facilities reserved for development. Traffic volumes for each roadway project in 2022 and 2032 are provided in Table 2. The development of the traffic volumes in the table are further discussed in the following section.

Table 1. Necessary Streets Facilities, Existing and Future

	Road Project	Limits		# of Lanes	Length (mi)	Construction Cost		Non-Construction Costs*	Total Capital Cost - New/ Improvements	Legacy Cost	Source	Notes
						Per Lane-Mile	Total					
Northwest	Marana Main Street	Sandario	Grier	2	0.54	$2,100,000	$2,268,000	$986,580	$3,255,000		Recent RTA Bids	
	Marana Main Street	Tangerine Farms Rd	Sandario	2	0.35					$873,000	Town of Marana	Debt Service
	Tangerine Farms Road	I-10 (Tangerine TI)	Clark Farms	4	4.1					$3,018,397	Outstanding Impact Fee Credits	Built by developers
	Clark Farms	Riccati Dr	Despain Dr	3	0.7							
	Tangerine Farms Road	Clark Farms	I-10 (Marana TI)	4	1.2	$2,100,000	$10,080,000	$5,896,800	$15,977,000		Recent RTA Bids	
	Marana Road Interchange, Phase 1	N/A	N/A	N/A	N/A				$6,753,000		Town of Marana	
	Clark Farms	Despain Dr	Lon Adams Rd	3	0.5	$2,100,000	$3,150,000	$1,370,250	$4,520,000		Recent RTA Bids	
	Clark Farms	Lon Adams Rd	Tangerine Farms Rd	4	2.1	$2,100,000	$17,640,000	$7,673,400	$25,313,000		Recent RTA Bids	
	Adonis Road	Grier Rd	Tangerine Rd	2	3.0	$2,100,000	$12,600,000	$8,001,000	$20,601,000		Recent RTA Bids	
	Tangerine Road Interchange	N/A	N/A	N/A	N/A				$4,500,000		Town of Marana	Cost split with NE
Northeast	Tangerine Road, Phase 1	Dove Mountain Blvd	Town Limits	4	2.4				$6,189,000		Town of Marana	Shortfall in impact fees at time of Phase 1 construction
	Tangerine Road, Phase 2	I-10 (Tangerine TI)	Dove Mountain Blvd	4	4.6				$42,537,000		Town of Marana	Calculated cost based on Phase 1 costs, less RTA and State funding
	Twin Peaks Road	Lambert Ln	Tangerine Rd	4	2.1					$3,642,259	Town of Marana	Debt Service
	Moore Road	Camino de Oeste	Thornydale Rd	2	1.3					$291,788	Outstanding cost	
	Cayton Road	Dove Mountain Blvd	Thornydale Rd	2	1.1	$2,100,000	$4,620,000	$2,009,700	$6,630,000		Recent RTA Bids	
	Tangerine Road Interchange	N/A	N/A		N/A				$1,500,000		Town of Marana	Cost split with NW
South	Twin Peaks Interchange	N/A	N/A	N/A	N/A					$3,757,886	Town of Marana	Debt Service
	Twin Peaks Road	I-10	Lambert Ln	4	1.3						Town of Marana	
	Twin Peaks Road/ Rattlesnake Pass	Saguaro Highlands Dr	Silverbell Rd	4	1.5				$18,001,838		Town of Marana	SCE 60% cost estimate
	Cortaro Road	I-10	Camino de Oeste	4	1.7				$8,134,735		Town of Marana	
	Silverbell Road	Ina Rd	Cortaro Rd	4	1.0				$21,068,682		Town of Marana	
	Ina Road	I-10	Silverbell Rd	4	1.1				$9,000,000		Town of Marana	
	Silverbell Road	Sunset Rd	Ina Rd	4	3.2				$8,013,159		Town of Marana	RTA estimates of difference between 3-lane and 4-lane for Marana portion of overall project

Total (New/Improvement Facilities)	$201,993,414	
Total (Legacy Facilities)		$11,583,330
TOTAL (ALL FACILITIES)	**$213,576,744**	

* Includes ROW, environmental mitigation, drainage, design, construction management, financing costs

Table 2. Current and Future Traffic Volumes

	Road Project	Limits		Speed Limit (mph)	Existing Volume (veh/day)[1]	Existing Volume Adjusted[2]	Existing Capacity (veh/day)[3]	Future Volume (veh/day)[4]	Future Volume Adjusted[5]	Future Capacity (veh/day)[6]
Northwest	Marana Main Street	Sandario Rd	Grier Rd	25	0		N/A	1,000	3,000	13,990
	Marana Main Street	Tangerine Farms Rd	Sandario Rd	25	1,000		16,730	300	4,300	16,730
	Tangerine Farms Road	I-10 (Tangerine TI)	Clark Farms	45	13,500		37,610	27,500		37,610
	Clark Farms	Riccati Dr	Despain Dr	40	3,200		17,567	8,700		17,567
	Tangerine Farms Road	Clark Farms	I-10 (Marana TI)	45	0		N/A	10,000		30,620
	Marana Road Interchange, Phase 1	N/A	N/A	N/A	N/A		N/A	N/A		N/A
	Clark Farms	Despain Dr	Lon Adams Rd	35	0		N/A	10,000		14,690
	Clark Farms	Lon Adams Rd	Tangerine Farms Rd	35	0		N/A	9,000		30,620
	Adonis Road	Grier Rd	Tangerine Rd	45	0		N/A	10,000		15,930
	Tangerine Road Interchange	N/A	N/A	N/A	N/A		N/A	N/A		N/A
Northeast	Tangerine Road, Phase 1	Dove Mountain Blvd	Town Limits	50	10,000	15,400	37,610	15,000	20,400	37,610
	Tangerine Road, Phase 2	I-10 (Tangerine TI)	Dove Mountain Blvd	50	8,000		16,730	14,000		37,610
	Twin Peaks Road	Lambert Ln	Tangerine Rd	45	16,000		37,610	23,500		37,610
	Moore Road	Camino De Oeste	Thornydale Rd	30	3,000		13,990	7,000		16,730
	Cayton Road	Dove Mountain Blvd	Thornydale Rd	30	0		N/A	5,400		13,990
	Tangerine Road Interchange	N/A	N/A	N/A	N/A		N/A	N/A		N/A
South	Twin Peaks Interchange	N/A	N/A	N/A	N/A		N/A	N/A		N/A
	Twin Peaks Road	I-10	Lambert Ln	45	18,000	22,000	37,610	29,000	33,000	37,610
	Twin Peaks Road/Rattlesnake Pass	Saguaro Highlands Dr	Silverbell Rd	45	12,500		16,730	16,000	22,700	37,610
	Cortaro Road	I-10	Camino de Oeste	40	25,000		37,610	29,000		37,610
	Silverbell Road	Ina Rd	Cortaro Rd	45	22,000	14,000	37,610	22,500		37,610
	Ina Road	I-10	Silverbell Rd	45	26,000		16,730	22,000	32,300	37,610
	Silverbell Road	Ina Rd	Sunset Rd	45	10,000		16,730	16,000		37,610

[1] From PAG 2021 Travel Demand Model using Marana Land Use Assumptions

[2] Used recent traffic count if significant differences between 2021 PAG Model and recent traffic counts

[3] Based on current road section and FDOT Capacity Tables

[4] From PAG Travel Demand Model using Marana 2031 Land Use Assumptions and regional growth factor

[5] Adjusted to better reflect anticipated volumes based on existing and planned developments

[6] Based on 2032 road section and FDOT Capacity Tables

2.2. PAG MODELING METHODOLOGY

The Pima Association of Governments (PAG) maintains a travel demand model that estimates the future volumes for the Tucson metropolitan area. A new 2031 model was developed for this study based on employment, population, and facility inputs provided by the project team in collaboration with the Town. Note that the results of this model (and the 2021 model, also provided by PAG) do not represent official PAG forecasts but are instead a special product developed by PAG for the Town of Marana. The model results were further adjusted to better represent 2022 and 2032 conditions considering the considerable growth in the Town in 2021 and anticipated growth through 2022.

The PAG model does not directly include ITE trip generation rates (which are typically used to determine how much traffic a development will generate). Instead, the model develops trip generation based on the characteristics of each Traffic Analysis Zone (TAZ), such as employment and population. Trips are then distributed on the surrounding roadway network based on origins and destinations, trip length, travel time, and available roadway capacity. Employment and population estimates were provided by Psomas based on previous model inputs, official PAG model inputs, and information provided by the Town.

The resulting volumes are shown on Table 2 (see previous page). In some cases, existing and/or future volumes were adjusted beyond what was provided in the PAG models based on recent traffic counts and other available information. In addition, volumes were adjusted to better represent 2022 and 2032 conditions.

To estimate the necessary public services, the daily roadway capacity for one lane-mile of arterial roadway was calculated. The general daily capacity for a single lane ranges from 7,000 to 9,000 vehicles per day (vpd), depending on the roadway type, vehicular access control, and whether the roadway is in an urban or a rural area. The Town uses performance criteria based on daily service volumes included in their 2017 *Transportation Impact Analysis* guidelines[1] to evaluate roadway Level of Service (LOS). LOS D is the performance standard for most areas and will be used in this study.

The often-used Florida Department of Transportation (FDOT) standards[2] for LOS D are similar to those used by the Town of Marana. It is recommended that the FDOT standards for LOS D for each roadway type be adopted for this study. The appropriate roadway capacities are shown in Table 2.

2.3. PROJECTED NEEDS

ARS §9-463.05(E)3 requires that this document shall include:

> "A description of all or the parts of the necessary public services or facility expansions and their costs necessitated by and attributable to development in the service area based on the approved land use assumptions, including an forecast of the costs of infrastructure, improvements, real property, financing, engineering and architectural services, which shall be prepared by qualified professionals licensed in this state, as applicable."

As shown in Table 1, there are approximately 70.8 lane-miles of new roadway attributable to new development, three traffic interchanges along I-10, and 50.6 miles of legacy facilities reserved for development, with an estimated total cost attributable to development of $110,623,843. The cost of preparing updates to the impact fee documents twice during the 10-year study period, based on the cost of this study, is $180,000 ($90,000 per update). Therefore, the total cost for providing these necessary public services associated with streets is $110,803,843 during the 10-year time period.

3. TRAVEL DEMAND PER DEMAND UNIT – METHODOLOGY

ARS §9-463.05(E)4 requires that this document shall include:

> "A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial and industrial."

Town staff provided a list of land uses which will be used in calculating the trip generation for future development projects. Each of these land uses has documented trip rates in the *ITE Trip Generation Manual*[3]. There have been some minor changes in the land uses since the adoption of the 2017 IIP to better fit Town policies and projected development. Table 3 shows the estimated roadway demand per unit of land use, and a description of the factors is included in the following sections.

3.1. AVERAGE TRIP LENGTH

The average trip length shown in Table 3 is based on trip length data from the Table 5 of the 2017 National Household Travel Survey[4] (NHTS). The survey data is collected from a sample of U.S. households and is expanded to provide national estimates of trips and travel distance by travel mode, trip purpose, and a number of household characteristics. The trip length for primary trips to high-traffic retail locations (such as gas stations and fast-food restaurants) was estimated to be half of the general retail trip length.

3.2. ITE TRIP GENERATION RATES

The ITE *Trip Generation Manual* contains trip generation rates for a wide variety of land uses by unit of land use measurement (i.e. per residential unit for residential developments, per 1,000 square feet for commercial, etc.). The 10th Edition, published in 2017, was referenced for this work. The PM peak hour rates were applied in the demand unit calculations. The PM peak hour rates were used because that period is typically the busiest period of the day and is generally what drives the need for additional capacity.

Table 3. Estimate of Streets Facility Demand per Unit of Land Use

Land Use Category	Unit	% Primary Trips	Average PM Peak Hour Trip Rate per Unit	Average Trip Length (mi)	% Travel Demand on Marana Arterial Network	Vehicle Miles of Travel Demand per Unit	Representative ITE Category	EDUs
Residential								
Single Family Residential	Dwelling Unit	100%	0.99	10.7	48%	5.1	210	1.0
Multi-Family	Dwelling Unit	100%	0.56	10.7	48%	2.9	220	0.6
Hotel/Motel	Rooms	100%	0.49	10.7	48%	2.5	310, 320	0.5
Congregate Care	Dwelling Unit	100%	0.18	10.7	48%	0.9	253	0.2
Single Family Residential (age restricted)	Dwelling Unit	100%	0.30	10.7	60%	1.9	251	0.4
Multi-Family (age restricted)	Dwelling Unit	100%	0.26	10.7	60%	1.7	252	0.3
Retail and Services								
< 15,000 sf	1000 sf	19%	8.90	7.1	40%	4.8	820	0.9
> 15,000 sf	1000 sf	66%	3.81	7.1	40%	7.1	820	1.4
High Traffic Retail	1000 sf	23%	29.14	3.6	40%	9.5	853, 912, 930, 934	1.9
Industrial	1000 sf	70%	0.72	10.7	40%	2.2	110, 151, 155	0.4
Office	1000 sf	75%	1.15	11.5	40%	4.0	710	0.8
Medical Facility	1000 sf	60%	2.13	10.7	40%	5.5	610, 630	1.1
Institutional	1000 sf	50%	1.17	6.4	40%	1.5	520, 530	0.3
Recreation	1000 sf	34%	1.16	10.4	40%	1.6	411, 495	0.3

3.3. PRIMARY TRIPS

Primary trips are trips to and from a specified land use which a driver intended to make without making other stops along the way. Drivers may also choose to divert from their originally intended path to make a secondary stop or may choose to make a stop along their original path. These trips are called diverted trips and pass-by trips, respectively. The calculations for determining impact fees are based solely on primary trips, so diverted trip and pass-by trip data in the ITE *Trip Generation Manual* was used to determine what percentage of trips are primary trips for each land use, with two exceptions. The manual does not include pass-by trip information for recreational uses such as a gym or rec center, so it was assumed that those uses would have a travel pattern similar to a gas station where many users stop by between home and work/school/etc. For the school uses, the primary trip percentage was estimated based on previous experience and is consistent with the percentage used in the *Pima County Street Facilities Infrastructure Improvements Plan*[5].

3.4. TRAVEL DEMAND ON THE ARTERIAL AND MAJOR COLLECTOR ROAD NETWORK

As previously discussed, only trips on the arterial and major collector roadways are considered in the development of impact fees. A general assumption, matching that in the 2017 IIP, is that 80% of travel occurs on the arterial/major collector system for most land use types. As the Town has grown, it is assumed that 60% of all residential trips are on Town roadways. For most of the other land uses, half of the generated trips will occur on Town roadways, while the other half will occur outside Town limits or on non-town roadways (such as I-10). Trips generated by age restricted residential developments are expected to include a higher percentage on Town roadways.

4. PROJECTED SERVICE UNITS FOR NEW DEVELOPMENT

ARS §9-463.05(E)5 requires that this document shall include:

> "The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."

In addition, ARS §9-463.05(E)6 requires that this document shall include:

> "The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."

The land use assumptions estimate that growth between 2023 and 2032 will include 13,942 new residential units (single family and multi-family combined) and 439 acres of non-residential development, estimated to include 2.54 million square feet of non-residential building area. The calculation assumes a non-residential floor area ratio (FAR) of 0.2.

5. REVENUE CONSIDERATIONS

Considering revenue, ARS §9-463.05(E)7 states that the IIP should include:

> "A forecast of revenues generated by new service units other than development fees, which shall include estimated state-shared revenue, highway users revenue, federal revenue, ad valorem property taxes, construction contracting or similar excise taxes and the capital recovery portion of utility fees attributable to development based on the approved land use assumptions, and a plan to include these contributions in determining the extent of the burden imposed by the development as required in subsection B, paragraph 12 of this section."

In order to provide an equitable obligation of transportation impact fees, both costs and credits must be considered. New development must be given credit for contributions to the various forms of funding which may be used for roadway improvements, such as the contribution of a development impact fee. Other sources of roadway infrastructure funding which can be identified as coming from a new development must be considered as credits for that development.

Further, the costs associated with correcting existing deficiencies cannot be placed as a burden on new development. Any money spent from common improvement funds to address a deficiency must consider credits to new development for which the improvement is associated. At this time, the only continuing revenue source which may be considered as credits to new development is the construction sales tax.

The Town currently has a 4.0% construction sales tax. The construction sales tax is nominally collected at the rate of 65% of the contract value, which is the presumptive proportion of the contract related to taxable building materials. The 4% rate includes the Town's base rate of 2% plus an additional 2% specific to contracting activities.

For example, a typical new 2,000-square-foot single family home would have an estimated construction cost of $325,912[6], and a related construction tax of $7,951.68. However, only half of the tax is creditable against the development fee, so the credit is $3,975.84, which is rounded up to $3,976.

The calculation methodology and complete table of construction sales tax credits by impact fee category are included in Appendix B of this report.

Note that the construction sales tax credit will be split between the streets facilities fee and the park fee for single family and multi-family residential developments (general and age-restricted) in the development of the fee studies for the two infrastructure categories.

The Town utilizes its HURF/VLT allocation solely for maintenance. Therefore, no credit will be provided for HURF/VLT funds. In addition, the Town does not have a property tax, and other state and federal revenues are undeterminable and intermittent. Therefore, the construction sales tax credit is the only source of credits considered in this study.

6. REFERENCES

[1] *Transportation Impact Analysis.* Town of Marana, November 2017.

[2] *Florida Quality and Level of Service Tables.* Florida Department of Transportation, 2020.

[3] *Trip Generation, 10th Edition*. Institute of Transportation Engineers (ITE). Washington, D.C., 2017.

[4] *Summary of Travel Trends, 2009 National Household Travel Survey*. Federal Highway Administration, July 2018. https://nhts.ornl.gov/assets/2017_nhts_summary_travel_trends.pdff, accessed May 2021.

[5] *Street Facilities Infrastructure Improvements Plan, Final Public Report.* Pima County, January 2020.

[6] *Building Valuation Data – February 2022.* International Code Council, https://www.iccsafe.org/products-and-services/i-codes/code-development-process/building-valuation-data/, accessed March 2022.

Appendix A
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Appendix B

Methodology for Construction Sales Tax Credit

1. Assuming typical building materials for each representative impact fee category, construction costs were determined using the International Code Council cost valuation tables.
2. The construction sales tax is based on a state formula[1] which includes the Town construction sales tax (4%), the total tax rate for the area (10.1% in Pima County[2]), and a percentage of the actual construction cost (65%)
    a. First, the formula includes a calculation of a tax factor on the overall tax burden:

        (65% x 10.1%) / (1 + (65% x 10.1%)) = 0.0616056

    b. Next, the formula multiplies this factor by the portion of the total sales tax that is the Town's to determine an adjusted sales tax rate

        0.0616056 x (4% / 10.1%) = 2.4398%
3. State law requires that all tax revenue received above the Town's normal sales tax be credited against the development impact fees. For the Town, the normal sales tax is 2%, compared to the overall construction sales tax of 4%. Therefore, 50% of the construction sales tax should be applied as a credit against the impact fees.
4. For impact fee categories which are unit based, representative building sizes were used to develop estimated construction costs and associated taxes. The following average square footages include residential living areas and additional accompanying areas.
    a. Single family residence (general and age-restricted) – 2,000 sq ft of living space, 400 sq ft garage
    b. Multi-family residence (general and age-restricted) – 1,115 sq ft total space per unit (rental)
    c. Hotel/motel – 550 sq ft of total space per unit (room)
    d. Congregate care – 350 sq ft of total space per unit (bed)
5. All other impact fees categories use 1,000 sq ft of construction for the construction tax credit, related directly to the impact fee burden, which is also calculated based on 1,000 sq ft.

[1] Formula is provided by the Arizona Department of Revenue (https://www.azdor.gov)
[2] Total tax rate is 5.6% for the state + 4% for Marana construction + 0.5% for the RTA = 10.1%

Construction Sales Tax Credit by Impact Fee Category

Impact Fee Category	ICC Building Group	ICC Construction Type	ICC Cost per sq ft	Average	Typical sq ft	Construction Cost	Total Construction sales tax	Creditable Construction Sales Tax	Credit Amount for Parks Fee	Credit Amount for Streets Fee
Single Family Residence	R3 - residential one and two family	5b	$150.87	$150.87	2,000	$325,912.00	$7,951.68	$3,976.00	$525.00	$3,451.00
	U - utility (garage)	5b	$60.43	$60.43	400					
Multi-Family Residence	R2 - residential multi-family	5b	$139.06	$139.06	1,115	$155,051.90	$3,783.00	$1,892.00	$525.00	$1,367.00
Single Family Residential (age restricted)	R3 - residential one and two family	5b	$150.87	$150.87	2,000	$325,912.00	$7,951.68	$3,976.00	$525.00	$3,451.00
	U - utility (garage)	5b	$60.43	$60.43	400					
Multi-Family (age restricted)	N/A	5b	$139.06	$139.06	1,115	$155,051.90	$3,783.00	$1,892.00	$525.00	$1,367.00
Hotel/Motel	R1 - residential hotels	5b	$178.00	$178.00	550	$97,900.00	$2,388.59	$1,195.00	$0.00	$1,195.00
Congregate Care	I2 - institutional, nursing homes	3a	$354.29	$267.77	355	$95,058.35	$2,319.26	$1,160.00	$0.00	$1,160.00
	R4 - care/assisted living	5a	$181.25							
Retail Services	M - mercantile	3b	$137.88	$137.88	1,000	$137,880.00	$3,364.03	$1,683.00	$0.00	$1,683.00
High Traffic Retail	B - business	3b	$187.36	$187.36	1,000	$187,360.00	$4,571.26	$2,286.00	$0.00	$2,286.00
Industrial	B - business	3b	$187.36	$187.36	1,000	$187,360.00	$4,571.26	$2,286.00	$0.00	$2,286.00
Office	B - business	3b	$187.36	$187.36	1,000	$187,360.00	$4,571.26	$2,286.00	$0.00	$2,286.00
Medical	I2 - institutional, hospitals	1b	$392.40	$392.40	1,000	$392,400.00	$9,573.88	$4,787.00	$0.00	$4,787.00
Institutional	A3 - assembly, churches	3b	$234.07	$210.47	1,000	$210,466.67	$5,135.02	$2,568.00	$0.00	$2,568.00
	E - educational	3b	$205.54							
	A3 - assembly, libraries, museums, community halls, general	3b	$191.79							
Recreation	A3 - museums, libraries	3b	$191.79	$191.79	1,000	$191,790.00	$4,679.34	$2,340.00	$0.00	$2,340.00

Town of Marana

Impact Fee Study Update and Parks Infrastructure Improvement Plan

March 2022

Prepared by
Town of Marana Parks and Recreation Department
Town of Marana Engineering Division
McGann & Associates, Landscape Architects

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Introduction:

In accordance with Arizona Revised Statute (ARS) §9-463.05 the Town of Marana assesses and collects Development Impact Fees to help pay for the construction of new parks and recreational facilities as needed to meet the increased demands placed on the municipal park system by new development.

As a precedent to the collection of Development Impact Fees, §9-463.05 requires that an Infrastructure Improvement Plan (IIP) be prepared to identify the required improvements. Per the subject statute, the IIP is defined as:

> *"…. a written plan that identifies each necessary public service or facility expansion that is proposed to be the subject of a development fee and otherwise complies with the requirements of this section and may be the municipality's capital improvements plan."*

Included in this document is the Town of Marana's updated Park Infrastructure Improvement Plan. This new IIP replaces the 2017 IIP which was adopted by Marana Ordinance 2017.029 on December 19, 2017. This new plan includes fee schedules and a list of capital improvements that are projected to be constructed over the next ten years.

Methodology:

This Impact Fee Study Update employs an incremental expansion method that identifies the Town's existing level of service and projects the level of service assumptions over the next ten years as the community grows. The existing level of service for parks and recreation facilities is assigned a value based on the cost of replacement. The value of the parks and recreation system is adjusted to subtract outstanding debt on existing facilities, the balance collected, unspent impact fees, developer fee credits and the cost of the Impact Fee Study.

The adjusted value of the existing parks and recreation facilities is then distributed across the existing level of community development to calculate a value of the existing parks system per dwelling. The adjusted value of the existing parks and recreation facilities relative to current development is then projected onto new development using estimates for future development found in the Town's land use assumptions.

Using this methodology, the Town's existing level of parks and recreation service is maintained as the community grows and the expansion of parks and recreation facilities necessary to meet the demand of growth has a supplemental funding source in development impact fees.

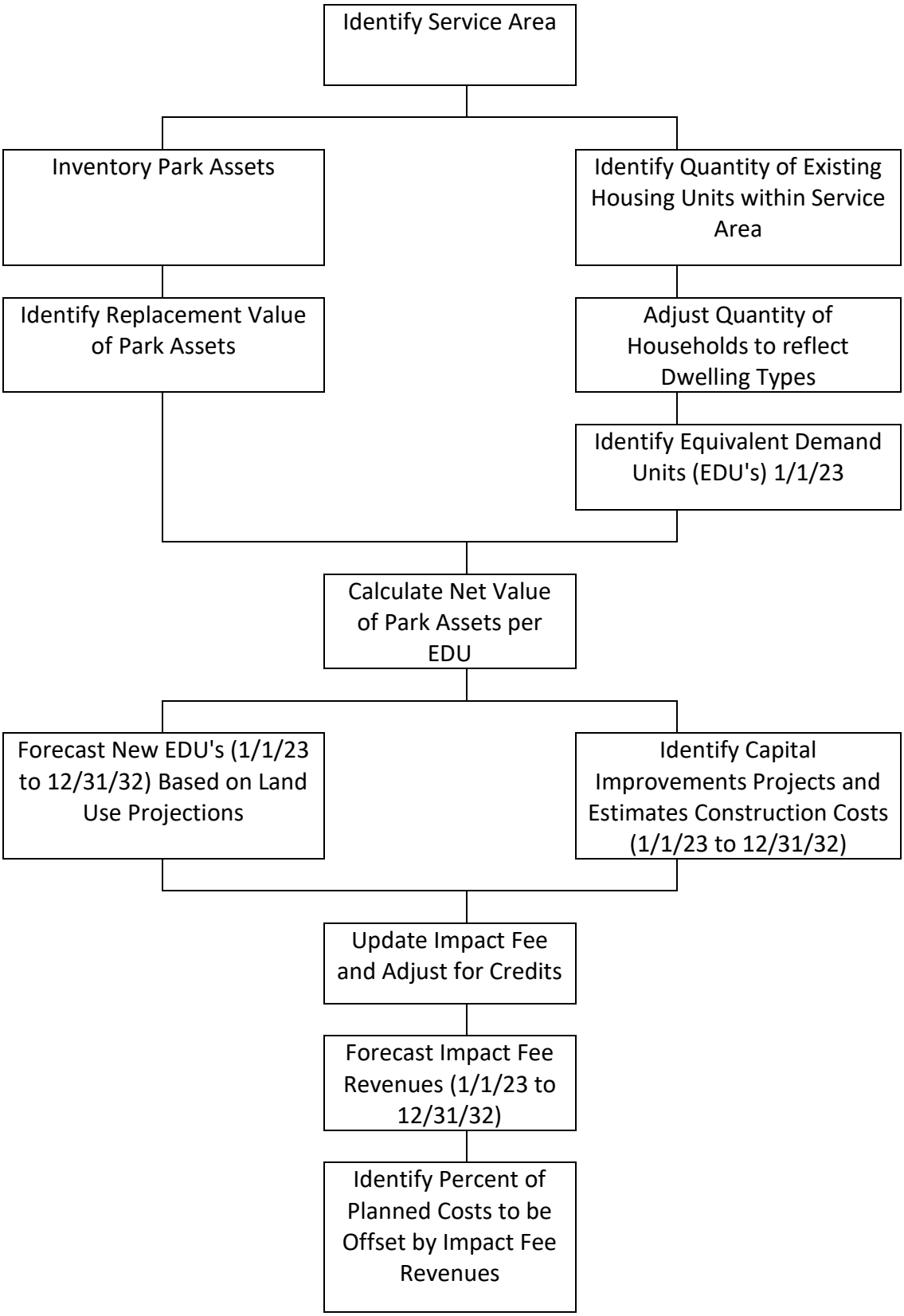
The advantages of using this incremental expansion method over other methods (e.g., a general standards based or plan-based method), include the following:

- The fee is based on the existing level of service provided by the Town instead of a national standard that fails to account for local jurisdictional variations.

- The incremental expansion method more accurately identifies the value of existing level of service compared to estimating a general cost per acre of developed parkland. Existing level of service is valued by assigning replacement costs to inventoried park assets.

- The incremental expansion method is flexible because the impact fee is based on existing level of service. Consequently, the Town may fine tune capital improvements identified in the IIP to meet changing community recreation needs. A standards-based approach based on the Parks and Recreation Master Plan would require an update to the Master Plan and a re-calculation of the impact fees to meet changing community needs.

Figure 1: Methodology



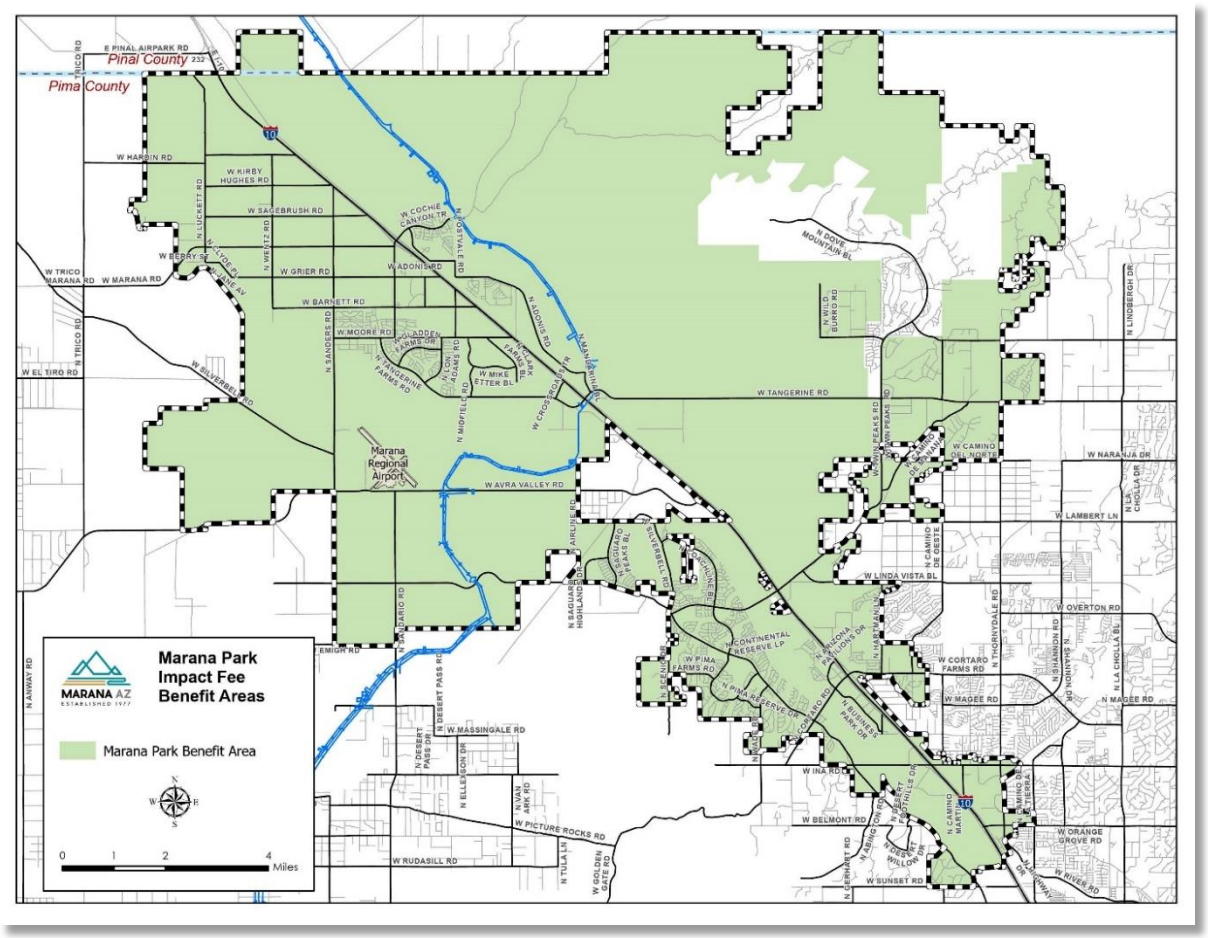
Service Area:

Service areas are defined in ARS §9-463.05 (T)9 as:

> *"… any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services of facility expansions and the development being served as prescribed in the infrastructure improvements plan."*

For purposes of this Impact Fee Study Update, there is one service area identified for the Town of Marana. This service area is shown in Figure 1, below. The service area includes all areas within the jurisdictional boundaries of the Town with the exception of lands within the Dove Mountain Specific Plan boundary. The Dove Mountain area is excluded based on a Town approved Development Agreement. For the remainder of the Town, the most densely developed areas are where existing municipal parks and recreation facilities are located. These densely developed areas are served by the Town's existing parks and other recreation facilities. It is in areas of new development that park and recreation facility expansion is needed to meet the demands created by growth.

Figure 2: Service Area



Consequently, new facilities that expand the parks and recreation system will directly benefit residents in areas of new growth in keeping with the legislative requirements for collecting development impact fees. There is, however, a need for additional trails to serve the developed areas of Marana. Since the Town is committed to providing a uniform level of service across the entire town, a single service area will be used.

Inventory of Existing Parks:

Provided on the following pages is a chart that summarizes the assets associated with the Town of Marana's existing park system. It includes only improvement types that would be eligible for impact fee funding and excludes items not eligible based on ARS §9-463.05. Per ARS §9-463.05.A, development impact fees may be used:

> *"… to offset costs to the municipality associated with providing necessary public services to a development, including the costs of infrastructure, improvements, real property, engineering and architectural services, financing and professional services required for the preparation or revision of development fee pursuant to this section, including the relevant portion of the infrastructure improvement plan."*

Per ARS §9-463.05.B and 9-463.05.T., development impact fees may not be used for:

> *"Construction, acquisition or expansion of public facilities or assets other than necessary public services or facility expansions identified in the infrastructure improvements plan."*
>
> *"Repair, operation or maintenance of existing or new necessary public services or facility expansions."*
>
> *"Upgrading, updating, expanding, correcting or replacing existing necessary public services to serve existing development in order to meet stricter safety, efficiency, environmental or regulatory standards."*
>
> *"Upgrading, updating, expanding, correcting or replacing existing necessary public services to provide a higher level of service to existing development."*
>
> *"Administrative, maintenance or operating costs of the municipality."*
>
> *"… vehicles, equipment or that portion of any facility that is used for amusement parks, aquariums, aquatic centers, auditoriums, arenas, arts and cultural facilities, bandstand and orchestra facilities, bathhouses, boathouses, clubhouses, community centers greater than three thousand square feet in floor area, environmental education centers, equestrian facilities, golf course facilities, greenhouses, lakes, museums, theme parks, water reclamation or riparian areas, wetlands, zoo facilities or similar recreational facilities, but may include swimming pools.*

Replacement Value:

Replacement values as shown on the following chart are based on:

- Replacement values identified in the 2017 plan escalated to reflect inflation in construction costs through January 1, 2023.
- Recent park construction project bids for similar facilities.
- Published construction cost data reports.

Figure 3: Inventory Table - Existing Parks and Replacement Value	Continental Ranch Park	Continental Reserve park	Crossroads at Silverbell Park	El Rio Neighborhood Park	Gladden Farms Park	Honea Heights Park	Ora Mae Harn Park	Saguaro Bloom Park	San Lucas Park	Tangerine Sky Park	Wade McLean Park	Wild Burro Trailhead	Sanders Road Trailhead	North Coachline Boulevard Trailhead	Total Facility Units	Replacement Value Per Unit	**Total Replacement Valve**
Acres (Total)	11.9	9.23	48.27	1.3	25.7	1.0	34.72	22.0	13.49	17.98	4.23	2.0	0.8	1.5	194.12		
Acres (Eligible)	11.9	9.23	30.0	1.3	25.7	1.0	30.0	22.0	13.49	17.98	4.24	2.0	0.8	1.5	171.14		
Real Property																	
Real Property - Eligible Park Sites	11.9	9.23	30.00	1.3	25.7	1	30.0	22.0	13.49	17.98	4.23	2.0	0.8	1.5	171.14	$30,000.00	$5,134,200.00
Buildings and Structures:																	
Community Center - Allowable Portion (SF)							3,000	1							3,000	$450.00	$1,350,000.00
Restroom Buildings	1	1	3		3		3		1	1	1	1			16	$165,000.00	$2,640,000.00
Concessions	1	1	1				1				1				5	$235,000.00	$1,175,000.00
Operations and Maintenance Building			1						1						2	$470,000.00	$940,000.00
Storage Building	1	1													2	$180,000.00	$360,000.00
Group Ramada (+/- 30' x 60' - Site Built or Pre-Eng.))			1				1			1					3	$130,000.00	$390,000.00
Picnic Ramada - (+/- 30' x 30' - Site Built or Pre-Eng.)		1	5		1	1	1	1	2	2	1			1	16	$85,000.00	$1,360,000.00
Picnic Ramada - Small - (Pre-Engineered)	4			1		1	6		2	2	1	1	1		17	$15,000.00	$255,000.00
Fields:																	
Multi-Sport Rectangular Fields with Lights			2		2		1								5	$400,000.00	$2,000,000.00
Multi-Sport Rectangular Fields w/o Lights									2		1				3	$150,000.00	$450,000.00
Slow Pitch Softball Fields with Lights			1				1								2	$560,000.00	$1,120,000.00
Fast Pitch Softball Fields with Lights			2				4								6	$355,000.00	$2,130,000.00
Fast Pitch Softball Fields w/o Lights	4	2									1				9	$200,000.00	$1,800,000.00
Courts:																	
Basketball Courts - with Lights	2	1	2				1		1	1					8	$150,000.00	$1,200,000.00
Basketball Courts - w/o Lights				.5		.5		1							2	$70,000.00	$140,000.00
Tennis Courts - with Lights	2	1	1				1								5	$150,000.00	$750,000.00
Tennis Courts - w/o Lights								1							1	$95,000.00	$95,000.00
Pickleball Courts - with Lights							3								3	$65,000.00	$195,000.00
Pickleball Courts - w/o Lights															0	$40,000.00	$0.00
Sand Volleyball Courts - with Lights			2						1						3	$36,000.00	$108,000.00
Sand Volleyball Courts - w/o Lights								1							1	$17,000.00	$17,000.00
Playgrounds and Play Structures:																	
Play Structures / Surfacing (2-5 Year)	1	1	2	1	1		2	1	1	1					11	$165,000.00	$1,815,000.00
Play Structures / Surfacing (5-12 Year)	1	1	1		1	1	1	1	1	1					9	$125,000.00	$1,125,000.00
Swings / Surfacing		1	1	1	1	1	1	1	1	1					9	$50,000.00	$450,000.00
Zip Line										1					1	$80,000.00	$80,000.00
Fabric Shade Canopies	2			1	2	1	8	2	2	1					19	$30,000.00	$570,000.00
Special Use Facilities:																	
Off-Leash Dog Park			1				1	1	1	1					5	$250,000.00	$1,250,000.00
Skate / Wheel Park	1														1	$1,200,000.00	$1,200,000.00
Aquatic Facilities:																	
Swimming Pool							1								1	$5,000,000.00	$5,000,000.00
Splash Pad			1		1										2	$500,000.00	$1,000,000.00

Figure 3: (Continued) Inventory Table - Existing Parks and Replacement Value	Continental Ranch Park	Continental Reserve park	Crossroads at Silverbell Park	El Rio Neighborhood Park	Gladden Farms Park	Honea Heights Park	Ora Mae Harn Park	Saguaro Bloom Park	San Lucas Park	Tangerine Sky Park	Wade McLean Park	Wild Burro Trailhead	Sanders Road Trailhead	North Coachline Blvd. Trailhead	Total Facility Units	Replacement Value Per Unit	**Total Replacement Value**
Miscellaneous Public Use Facilities:																	
Horseshoe Pits	2		2				1								5	$3,000.00	$15,000.00
Benches	10	6	7	1	15		22	10	12	8	4	1		2	98	$750.00	$73,500.00
Picnic Tables	8	10	32	1	14	7	39	4	6	13		1		2	137	$1,450.00	$191,800.00
Barbecue Grills	2	4	8		3	2	9		5	6				1	40	$600.00	$24,000.00
Bleachers	8	2	6		2	1	5				2				26	$3,000.00	$78,000.00
Exercise Stations - Fitness Area		1					10		6						17	$1,500.00	$25,500.00
Trash Receptacles	14	8	43	3	9	4	52	10	10	10	2			1	166	$300.00	$49,800.00
Drinking Fountains	7	4	8	1	3	3	8		3	1	1			1	40	$3,500.00	$140,000.00
Bicycle Racks	1	1	1	1	3	1	1	1	1	1					12	$800.00	$9,600.00
Supporting Infrastructure:																	
Park Access / Circulation Drives (LF)	1,500	430	3,000	107	3,160	400	2,200	1,100	950	1,300				330	14,477	$85.00	$1,230,545.00
Paved Parking Spaces (EA)	133	59	305	9	231	12	202	67	51	60		79	1	27	1,1,243	$1,250.00	$1,553,750.00
Electrical Service - Average (Acre)															171.14	$11,000.00	$1,882,540.00
Potable Water Service - Average (Acre)															171.14	$2,000.00	$342,280.00
Sanitary Sewer System - Private / On-Site (Acre)															171.14	$2,500.00	$427,850.00
Fencing (Acre)															171.14	$7,350.00	$1,257,879.00
Signage (Acre)															171.14	$3,000.00	$513,420.00
Parking Lot and Security Lighting (Acre)															171.14	$14,000.00	$2,395,960.00
Irrigation Booster Pumps		1	1		1				1						4	$10,000.00	$40,000.00
Landscape and Irrigation:																	
Landscape - Turf Areas Other than Fields (Acres)	2.7	1.9	2.34	.32	1.21	.02	9.96	.77	2.68	.97	1.5				24.37	$30,000.00	$731,100.00
Landscape - Trees (EA)	75	40	407	15	239	15	110	25	72	50	24			20	1,092	$300.00	$327,600.00
Turf Irrigation System - Other than Fields (SF)	2.7	1.9	2.34	.32	1.21	.02	9.96	.77	2.68	.97	1.5				24.37	$22,000.00	$536,140.00
Drip Irrigation System (Acres)															171.14	$3,500.00	$598,990.00
Automated Irrigation Control System - Med - Large	1	1	1		1		1	1	1	1				1	9	$7,500.00	$67,500.00
Automated Irrigation Control System - Small				1		1					1			1	4	$2,500.00	$10,000.00
Hardscape / Pedestrian Paving:																	
Accessible Walkways - Concrete (LF)	3,300	1,100	6,500		2,770	520	5,300	2,050	960	2,400				220	25,120	$48,00	$1,205,760.00
HC Ramps	2	2	3		6	1	3	6	2	2				1	28	$900.00	$25,200.00
Pathways and Trails:																	
Loop Shared-Use Pathways															18.22	$400,000.00	$7,288,000.00
Loop Road / Highway Underpasses															3	$300,000.00	$900,000.00
In-Park Shared-Use Pathways - Asphalt (LF)		450	6.850	500	2,600				3,200	3,150					9,900	$15.00	$148,500.00
In-Park Decomposed Granite Pathways (LF)								2,700							2,700	$4.00	$10,800.00
Single Track Trails (Miles)															45.6	$93,500.00	$4,263,600.00
																Total	**$57,329,614.00**

Service Units as Equivalent Demand Units:

ARS §9-463.05 requires that service units be defined in an impact fee study and used as the basis for impact fee collection. This Impact Fee Study uses an Equivalent Demand Unit (EDU) as the service unit for the park impact fee.

To calculate an EDU, housing unit types are weighted in relation to single-family detached housing. The weight of each housing type reflects a park service multiplier derived from the average household size for each housing type based on United States Census Bureau statistics. The average household size for a single-family detached housing unit is 2.7 while the average household size of a multi-family/single-family attached housing unit is 1.8. The park service multiplier for a single-family detached residence is therefore 1.0 while the park service multiplier for a multi-family/single-family attached dwelling unit is 0.67. The sum of these weighted dwelling units by housing type results in total EDUs for the Town.

Unlike impact fee studies for parks improvements, impact fee studies for transportation infrastructure expansion often use land use categories that are identified through analysis of vehicle usage and trip data that is available locally and is part of published transportation planning literature. Because there is no data on visits to existing parks, the Impact Fee Study for Parks and Recreation Facilities makes use of the differentiation between single-family and multi-family residential units and their average household sizes to fine tune the definition of service units for the purpose of establishing a park impact fee.

Proportionate Share (Residential Development vs. Non-Residential Development):

New residential development creates incremental demand for expanded parks and recreation facilities while the demand created by non-residential development is relatively low. The proportionate share of the cost of parks and recreation service for non-residential development is low enough that it does not justify collecting development impact fees.

Future impact fee studies may reconsider the non-residential share of the cost of parks and recreation infrastructure as the character of development in the Town changes over time or as future research on the impact of non-residential development is published.

Figure 4: Service Units as Equivalent Demand Units

Housing Type	Average Household Size (Persons)	Equivalent Demand Units
Single Family Detached	2.7 *	1.00
Multi-Family / Single Family Attached	1.8 *	0.67

Reference: U.S. Census Bureau

Figure 5: Total Quantity of Existing Equivalent Demand Units (EDU's) - January 1, 2023:

Housing Type	Dwelling Units (January 1, 2023)	Multiplier	Service Units (EDU's) (January 1, 2023)
Single Family Detached	16,679	1.00	16,679
Multi-Family / Attached	2,220	0.67	1,487
		Total - January 1, 2023	**18,166**

Necessary Public Services - Existing:

As required in ARS §9-463.05(E)1, a "necessary public service" must meet the following criteria:

> *"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."*

In addition, ARS §9-463.05(E)2 requires:

> *"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."*

In response to the required analysis of existing, necessary public park services, an inventory of parks and recreation assets throughout the Town of Marana has been compiled. (See Section 4 of this document). The inventory was based on data provided by the Town of Marana Parks and Recreation Department and lists existing park amenities by facility (site) with an identified replacement cost. The inventory excludes park acreage beyond the 30-acre limit referenced in ARS §9463.05(T)7(G).

The existing level of service provided by the Town's current parks and recreation facilities is quantified by distributing the value of the existing parks and recreation facilities over the total number of existing EDUs in the Town. The existing number of EDUs is described in Figure 5. Figure 3 describes the total value of existing parks and recreation infrastructure. The existing level of service provided by the Town of Marana's park infrastructure is quantified by dividing the total value of the existing infrastructure (See Section 4) by the existing number of EDUs (Figure 5).

Figure 6: Existing Park Value by Equivalent Demand Unit

	Credits	Offsets	Total
Total Replacement Value	$57,329,614.00		
Impact Fee Account Balance	$150.00		
Outstanding Impact Fee Credits		$0.00	
Outstanding Park Debt		$0.00	
Subtotal	$57,329,764.00		
Adjusted Existing Park Value			$57,329,764.00
Divided by EDU			18,166
Net Value per EDU			$3,156.00

Necessary Public Services - New Development:

ARS §9-463.05(E)3 requires:

> *"A description of all or the parts of the necessary public services or facility expansions and their costs necessitated by and attributable to development in the service area based on the approved land use assumptions, including a forecast of the costs of infrastructure, improvements, real property, financing, engineering and architectural services, which shall be prepared by qualified professionals licensed in this state, as applicable."*

In response to the statutory mandate for a description of parks and recreation facility expansion projects required to meet the demand of new growth, the Town of Marana has developed the Ten-Year Capital Improvement Plan for park facilities. This plan is summarized in Figure 5 below. Impact fees that are collected between January 1, 2023 and December 31, 2032 will be directed to the capital improvements identified in Figure 5 with the understanding that A.R.S. §9-463.05 allows that:

> *"…a municipality may amend an infrastructure improvements plan adopted pursuant to this section without a public hearing if the amendment addresses only elements of necessary public services in the existing infrastructure improvements plan and the changes to the plan will not, individually or cumulatively with other amendments adopted pursuant to this subsection, increase the level of service in the service area or cause a development fee increase…".*

Figure 7 - Parks Capital Improvement Plan - January 1, 2023 to December 31, 2032:

Project	Development Cost
El Rio Disc Golf Course	$240,000.00
El Rio Recreation Area - Loop Access Parking Lot	$170,000.00
Gladden Farms Baseball Field Improvements	$550,000.00
Gladden Farms Lighted Soccer Fields	$238,587.00
Tortolita Preserve Trailhead, Trails, and Fencing	$130,000.00
Honea Heights Park - Phase 2 Improvements	$1,050,000.00
Continental Ranch Park to Loop Extension	$350,000.00
New Competition Swimming Pool (50 Meter)	$3,275,000.00
Ora Mae Harn Park Facility Expansion	$1,485,000.00
Saguaro Bloom Park - Phase 1	$1,332,101.00
Saguaro Bloom Park - Phase 2	$4,000,000.00
Gladden Farms Bike Park	$1,000,000.00
Twin Peaks Park District Park - Land Acquisition and Phase 1 Development (*See Note 1)	$14,800,000.00
Mandarina Community Park	$6,300,000.00
Impact Fee Study	$50,000.00
Total	**$34,970,688.00**

***Note 1**: See "Town of Marana Parks and Recreation Master Plan 2020-2030" (Developed Park Element) for description of the proposed Twin Peaks Corridor District Park.

Updated Park Impact Fee per Service Unit:

ARS §9-463.05(E)3 requires:

> *"A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial and industrial."*

Figure 8 meets the statutory requirement described above. The updated park impact fee is a projection of existing level of service to new development. Figure 8 converts the net value per EDU to cost per housing unit by multiplying it by the park Service Unit Multiplier. The updated impact fee derived in Figure 8 does not reflect any credits or allowable deductions.

Figure 8: Updated Parks Impact Fee per Equivalent Demand Unit (Before Credits)

		Single Family	Multi-Family
Net Value per EDU	$3,156.00		
Park Service Unit Multiplier		1.00	0.67
Updated Impact Fee		$3,156.00	$2,115.00
Current Fee (Including Credits)		$2,964,00	$1,986.00
Percent Change		+6.5%	+6.5%

Projected Service Units for New Development:

ARS §9-463.05(E)3 requires:

> *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."*

The Town of Marana has developed Land Use Assumptions that estimate the number of new dwelling units expected over the next ten years. Figure 9 presents the existing and future dwelling units in the 10-year window based on the Town's Land Use Assumptions. The final result is the number of new EDUs expected over the next ten years.

Figure 9: Park Equivalent Demand Units (January 1, 2023 to December 31, 2032)

Housing Type	**Dwelling Units (1/1/23)**	**Park Service Unit Multiplier**	**Service Units - EDU's (1/1/23)**
Single Family Detached	16,679	1.00	16,679
Multi-Family / Single Family Attached	2,220	0.67	1,487
Total EDU's - (1/1/23)			18,166
Housing Type	**Dwelling Units (12/31/32)**	**Park Service Unit Multiplier**	**Service Units - EDU's (12/31/32)**
Single Family Detached	28,361	1.00	28,361
Multi-Family / Single Family Attached	4,480	0.67	3,002
Total EDU's - (12/31/32)			31,363
New EDU's (1/1/23 to 13/31/32)			**13,197**

Projected Park Impact Fee Revenue (January 1, 2023 to December 31, 2032):

ARS §9-463.05(E)3 requires:

> *"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."*

Figure 10 calculates the total expected revenue from impact fees collected between January 1, 2023 and December 31, 2032 based on the estimated number of new EDUs (Figure 9) and updated impact fee. The total projected revenue does not include development credits.

Figure 10: Projected Park Impact Fee Revenue - (1/1/23 to 12/31/23) (Before Credits)

Service Area	New EDU's	Impact Fee / EDU (Before Credits)	Projected Revenue 1/1/23 to 12/31/32 (Before Credits)	Planned Costs
Town-wide	13,197	$3,156.00	$41,649,732.00	$34,970,688.00

ARS §9-463.05(E)3 requires:

> *"A forecast of revenues generated by new service units other than development fees, which shall include estimated state-shared revenue, highway users revenue, federal revenue, ad valorem property taxes, construction contracting or similar excise taxes and the capital recovery portion of utility fees attributable to development based on the approved land use assumptions, and a plan to include these contributions in determining the extent of the burden imposed by the development as required in subsection B, paragraph 12 of this section."*

The Town of Marana collects no property tax to include in revenue forecasts. However, the Town does collect a 4% construction sales tax and also receives revenue from the state related to gas taxes. It is recommended that **Five Hundred Dollars ($500.00)** of the sales tax be credited on a per EDU basis, resulting in a fee of **Two Thousand Six-Hundred and Fifty-Six Dollars ($2,656.00) per EDU**. Figure 11 calculates the projected revenue and percent of planned costs covered by this revenue forecast. The remainder of the sales tax credit would be credited against the yet-to-be-calculated Street Facilities fee.

It is recommended that the credits associated with HURF/VLT be applied fully to the street facilities fee. If approved, no additional credits would be applied to the Parks and Recreational Facilities fee.

Figure 11: Projected Park Impact Fee Revenue - January 1, 2023 to December 31, 2032 (After Credits):

Service Area	New EDU's	Impact Fee / EDU (Less the $500.00 Credit)	Projected Revenue (1/1/23 to 12/31/32)	Planned Costs	Percent of Planned Costs
Town-wide	13,197	$2,656.00	$35,051,232.00	$34,970,688.00	100%

In summary, the Impact Fee Update and Infrastructure Improvement Plan will result in a final calculation of the Impact Fee per EDU of **Two Thousand Six-Hundred and Fifty-Six Dollars ($2,656.00).**

DRAFT
2022 WATER IMPACT FEE INFRASTRUCTURE IMPROVEMENT PLAN
Town of Marana

Prepared for:

MARANA AZ
WATER

Marana Water Department
11555 W. Civic Center Drive, Building A3
Marana, Arizona 85653

Project Number: 527.141

May 2022

WestLand Resources

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APPENDICES

Appendix A. Opinions of Probable Construction Cost and Site Plans
Appendix B. Marana and Oro Valley Service Overlap Area

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1. INTRODUCTION

The Town of Marana (Town) through the Marana Water Department (Marana Water) serves water to the area shown in blue and orange in **Figure 1**. Marana Water's service to the areas in orange is enabled by water wheeled through Tucson Water's water system, pursuant to an Intergovernmental Agreement (IGA) with the City of Tucson. In addition, the Town provides renewable water resources to reconcile water use in several areas served by Tucson Water through an IGA with City of Tucson (**Figure 1**).

Currently, the Town has a designation of assured water supply (DAWS) from the Arizona Department of Water Resources (ADWR) which allows the Town to approve water supply for new development. To supply new development, Marana Water will expand its renewable water resources portfolio.

The water system is categorized into seven independent water systems as shown in **Figure 2**. Each water system is further defined by water pressure zones (**Figure 2**) so that all customers receive water at a reasonable pressure (between approximately 40 and 85 pounds per square inch [psi]).

There are seven individual water systems in the Marana Water Service Area:

- North Marana Water System
- Tangerine Business Park Water System
- Hartman Vistas Water System
- Picture Rocks Water System
- Saguaro Bloom Water System
- Marana Airport Water System
- Palo Verde Water System

The purpose of the Infrastructure Improvement Plan (IIP) is to determine the capital improvements and renewable water resource acquisitions required to meet the demands associated with the next 10 years of growth, and to estimate the costs of those improvements and acquisitions.

2. BENEFIT AREAS

Benefit areas are areas that derive benefit from unused existing capacity or proposed capacity improvements to the water system including water rights acquisition. **Figure 3** shows the approximate location of the five benefit areas defined in this IIP. New developments are subject to fees associated with the benefit area that is defined by the water system the new development is connecting to.

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Some improvements will benefit multiple areas. For example, the acquisition of renewable water resources benefits all eleven benefit areas. The eleven benefit areas are:

- North Marana Benefit Area – developments connecting to the North Marana Water System or the Tangerine Business Park Water System.
- Twin Peaks Benefit Area – developments connecting to the Hartman Vistas Water System, Picture Rocks Water System, or the Marana Airport Water System.
- Saguaro Bloom Benefit Area – developments connecting to the Saguaro Bloom Water System.
- Palo Verde Benefit Area – developments connecting to the Palo Verde Water System.
- IGA Benefit Area – developments connecting to Tucson Water's water system through IGA with Marana, in one of two ways: 1) as a customer of Marana Water, in the Marana Water Wheeling Service Area or 2) as a customer of Tucson Water in the Tucson Non-Contracted Service Area.

3. LEVEL OF SERVICE

This section describes the level of service of the water supply, storage, and distribution system for each of the benefit areas, and for existing and future customers.

3.1. LEVEL OF SERVICE FOR EXISTING CUSTOMERS

The level of service for existing customers is generally:

- Storage Capacity > 1.5 times the average day demand (ADD) plus fire flow storage requirement, where the fire flow storage requirement is equal to the fire flow rate requirement times the fire flow duration requirement. For example, if the fire flow rate requirement is 1,000 gallons per minute (gpm) and the fire flow duration requirement is 2 hours (120 minutes), then the fire flow storage requirement is 1,000 gpm times 120 minutes, or 120,000 gallons.
- Well Capacity > peak day demand (PDD) with the largest well out of service, unless otherwise noted for specific zones. PDD = 2 times ADD.
  - The Hartman Vistas Water System is interconnected with the Oro Valley Water Utility, and since this interconnection can be used if a well is out of service, the well requirement for the Hartman Vista Water System is that the total well capacity must be greater than PDD.
  - The well capacity requirement for the Palo Verde and Tangerine Business Park Water Systems is that the well capacity be greater than PDD; there is no requirement for redundant well capacity currently.
- Booster Capacity

  - For a pressure zone or zones without gravity storage, the booster requirement is the greater of PDD plus the fire flow rate requirement or peak hour demand (PHD), where PHD = 3.5 times ADD if ADD <= 1,000 gpm, and 3.0 times ADD if ADD > 1,000 gpm.
  - For pressure zones with gravity storage sufficient to meet the greater of PDD plus fire flow or PHD, the booster capacity requirement is PDD. Under existing conditions, only the Twin Peaks Y and Z pressure zones have sufficient gravity capacity to supply PDD plus fire flow.

- Distribution System Capacity
  - During normal flow conditions, customers should receive water at between approximately 40 psi and 85 psi pressure.
  - The potable water distribution system must be capable of providing peak flow throughout the system while maintaining a minimum of 20 psi pressure throughout the system. Peak flow is the greater of PHD or PDD plus fire flow. If PDD plus fire flow is used, the system is modeled assuming an appropriate fire flow at all points in the system.

The fire flow rate and duration requirements are set by the fire marshal and are based on the International Fire Code (IFC) for each new development. The fire flow for a specific pressure zone is equal to the greatest individual fire flow/duration requirement within the pressure zone. If multiple pressure zones share a resource, such as storage, then the fire flow requirement is based on the largest fire flow/duration requirement within the connected pressure zones. **Table 1** shows the fire flow requirements for specific zones for the existing water system.

Table 1. Fire Flow Requirements for Existing Customers

Water System	Water Pressure Zone	Fire Flow (gpm)	Fire Flow Duration (hours)
North Marana	W+	2,875	2
	X	1,000	2
Tangerine Business Park	Y	1,750	2
Picture Rocks	CR	2,875	3
	PR	700	2
	Y	2,500	2
	Z	1,000	2
Hartman Vistas	Y	4,000	4
	Y+	1,875	4
	Z	1,000	2
Saguaro Bloom	X	2,000	2
Palo Verde	PV	Note 1	Note 1
Marana Airport	X	2,750	2

Notes: 1. Palo Verde Water System does not have a fire flow requirement.

3.2. LEVEL OF SERVICE FOR FUTURE CUSTOMERS

The level of service in terms of water system engineering design criteria will be the same as stated above for all water systems. The Town will not address the lack of redundant well capacity or change the level of service for the Palo Verde Water System, and there is no growth projected for this area. Proposed projects will provide redundant well capacity in the Tangerine Business Park Water System; however, the purpose of these projects was to provide sufficient well capacity for future growth. No changes to fire flow and duration requirements are anticipated over the next 10 years.

4. 10-YEAR LAND USE ASSUMPTIONS

The Town provided land use assumptions for the 10-year study period including growth projections from 2023 through 2027 and from 2028 through 2032. The land use assumptions are in Equivalent Dwelling Units (EDU), where one EDU is equivalent to the water demand for one single-family residence.

Table 2 shows each development with the appropriate assignment of EDU. **Table 3** also shows which water system the development is assigned to. The location of each development is shown in **Figure 4**.

Table 2. Projected Growth in Equivalent Dwelling Units by Development Area

Development Area	Water System	Projected Growth, EDUs		
		2023-2027	2028-2032	2023-2032
Crossroads At Gladden	North Marana	160	328	488
Custom Homes		15	15	30
Cypress Gardens		100	117	217
Gladden Farms II		1,421	0	1,421
Heritage Park Shoppes		16	20	36
Mandarina (MU)		532	810	1,342
Mandarina South (MU)		40	150	190
Marana & I10 (Dahlstrom Commercial)		12	100	112
Marana Main St. (Commercial)		16	24	40
Marana Towne Center (MU)		40	80	120
Payson Farms (Remington Ranch)		457	0	457
Rancho Marana - West (MU)		150	4	154
Rancho Marana Town Center (Commercial)		0	20	20
Sanders Grove		100	600	700
Stonegate		300	700	1,000
Tangerine Commerce Park		60	60	120
Uptown		0	300	300

Development Area	Water System	Projected Growth, EDUs		
		2023-2027	2028-2032	2023-2032
Vanderbilt Farms (Monarch)		500	1,000	1,500
Villages of Barnett		50	0	50
Villages of Tortolita		0	300	300
Breakers Rd Industrial	Tangerine Business Park	160	0	160
Marana Technology Campus		36	0	36
Tangerine Business Park (Commercial)		20	8	28
Cortaro Ranch (Commercial)	Hartman Vistas	36	0	36
De Anza		150	0	150
Joplin Estates (MU)		0	185	185
Linda Vista Village (MU)		500	193	693
Marana Spectrum/Center (MU)		160	188	348
Preserve at Twin Peaks (Lennar)		50	0	50
Twin Peaks Crossing (Cardinal)(MU)		0	154	154
Twin Peaks Estates (Tivera)		82	0	82
Twin Peaks Rd (Future Rezones)		0	100	100
Twin Peaks Vista		58	0	58
Pima Farms North (Commercial)	Picture Rocks	88	4	92
La Puerta del Norte East (Summerset)	Saguaro Bloom	150	0	150
Saguaro Bloom		700	0	700
Airport	Marana Airport	20	20	40
Orange Grove Industrial (Commercial)	IGA	4	8	12
Riverside @ Silverbell (SE Ina/SB) (MU)		92	0	92
Silverbell Ridge (SW of Ina)		56	0	56
Sonoran Preserve at Bajada		14	0	14
Tang Thornydale SW Corner Rezone (MU)		145	40	185
Tangerine Thornydale (Villagio, HSL) (MU)		107	0	107
Tortolita 30 Rezone		40	0	40
Tortolita Vistas		40	0	40
	Total	**6,677**	**5,528**	**12,205**

Table 3 shows the 10-year projected growth in EDUs for each of the benefit areas with projected growth.

Table 3. 10-year Projected Growth by Benefit Area

Benefit Area	Projected Growth, EDUs		
	2023-2027	2028-2032	2023-2032
North Marana	4,185	4,636	8,821
Twin Peaks	1,144	844	1,988
Saguaro Bloom	850	0	850
Palo Verde	0	0	0
IGA	498	48	546
Total	**6,677**	**5,528**	**12,205**

Table 4 shows the projected annual growth in EDUs for each benefit area with projected growth. The annual growth is based on the number of existing EDUs and 5- and 10-year projected EDUs provided by the Town. The growth rate for intermediate years was estimated using a constant growth rate for each 5-year period and adjusted so each year has a whole number of EDUs.

Table 4. Projected Annual Growth for Each Benefit Area

Benefit Area	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
North Marana	837	837	837	837	837	927	927	927	927	928	8,821
Twin Peaks	228	229	229	229	229	168	169	169	169	169	1,988
Saguaro Bloom	170	170	170	170	170	0	0	0	0	0	850
Palo Verde	0	0	0	0	0	0	0	0	0	0	0
IGA	99	99	100	100	100	9	9	10	10	10	546
Total	**1,334**	**1,335**	**1,336**	**1,336**	**1,336**	**1,104**	**1,105**	**1,106**	**1,106**	**1,107**	**12,205**

5. EXISTING CAPACITY REQUIREMENTS

In this section, the storage, well, and booster capacities are compared to existing demands. The existing water infrastructure is shown in **Figure 5**.

The following assumptions are used to calculate the flows generated from each EDU.

- Each EDU represents 2.7 persons per dwelling unit (ppdu) of equivalent population.
- The average demand per person or equivalent person is 100 gallons per capita per day (gpcd).
- The ADD per EDU is 2.7 ppdu times 100 gpcd or 270 gpd/EDU.
- The PDD is 2 times ADD or 540 gpd/EDU.
- The PHD is 3.5 times ADD or 945 gpd/EDU if ADD is <= 1,000 gpd, and 3.0 times ADD or 810 gpd/EDU if ADD > 1,000 gpd. For some areas, the PHD is based on an instantaneous demand requirement for the pressure zone.

Unless otherwise noted, the system requirements are:

- Storage capacity > 1.5 times ADD plus fire flow storage.
- Well capacity > PDD with the largest well out of service or PDD if interconnected with another water system.
- Booster capacity (without gravity storage) greater of PDD plus fire flow or PHD. Booster capacity (with gravity storage) is equal to PDD.
- During normal flow conditions, customers should receive water at between approximately 40 psi and 85 psi pressure.
- The distribution system must be capable of providing peak flow while maintaining 20 psi throughout the system.

Table 5 shows the existing EDUs in each Water System and pressure zone. The "existing" EDU value is based on the Town's estimate of existing plus projected growth through November 2022.

Table 5. Existing Equivalent Dwelling Units

Water System	Water Pressure Zone	Existing EDUs
North Marana	W+	5,259
	X	195
Tangerine Business Park	Y	14
Picture Rocks	CR	2,322
	PR	233
	Y	114
	Z	86
Hartman Vistas	A	62
	A+	91
	Y	1,158
	Y+	687
	Z	359
Saguaro Bloom	X	1,699
Palo Verde	PV	60
Marana Airport	X	40
	Total	**12,383**

5.1. EXISTING DEMANDS

Based on historical flow data, the average demand for the Marana water system is approximately 270 gpd per EDU. **Table 6** shows the existing ADD, PDD, and PHD for the system broken down by Water System and pressure zone.

Table 6. Existing Demands

Water System	Water Pressure Zone	Average Day Demand (gpd)	Peak Day Demand (gpm)	Peak Hour Demand (gpm)
North Marana	W+	1,419,930	1,972	3,451
	X	52,650	73	128
Tangerine Business Park	Y	3,780	5	9
Picture Rocks	CR	626,940	871	1,524
	PR	62,910	87	153
	Y	30,780	43	75
	Z	23,220	32	56
Hartman Vistas	Y	1,158	434	760
	Y+	687	258	451
	Z	359	135	236
	A	16,740	23	41
	A+	24,570	34	60
Saguaro Bloom	X	458,730	637	1,115
Palo Verde	PV	16,200	23	39
Marana Airport	X	11,880	17	29
Total		**3,343,410**	**4,644**	**8,126**

5.2. EXISTING STORAGE CAPACITY

The required minimum storage reservoir requirement is equal to 1.5 times ADD plus the fire flow / duration requirement. The fire flow requirement is equal to flowrate times duration which results in a volume of water. For example, 1,000 gpm for 2 hours (120 minutes) is 120,000 gallons. The Palo Verde Water System does not have a fire flow requirement.

If storage is shared by two or more zones, the highest fire flow requirement of the zones is used to calculate the storage requirement.

Table 7 shows the fire flow requirement (flow and duration), the current storage reservoir requirement, the existing reservoir capacity, and the amount of excess capacity for each pressure zone. Excess storage in a red font and parenthesis indicates a negative value, which means a deficiency in storage.

Table 7. Existing Storage Capacity

Water System	Zone	Potable Storage Required (gallons)	Fire Flow Storage Required (gallons)	Total Storage Required (gallons)	Total Available Storage (gallons)	Excess Storage (gallons)
North Marana	W+, X	2,208,870	345,000	2,553,870	2,084,000	(469,870)
Tangerine Business Park	Y	5,670	210,000	215,670	500,000	284,330
Picture Rocks	CR, PR, Z	1,069,605	517,500	1,587,105	1,250,000	(337,105)
	Y	46,170	300,000	346,170	1,000,000	653,830
Hartman Vistas	All	954,585	960,000	1,914,585	2,385,000	470,415
Saguaro Bloom	X	688,095	240,000	928,095	1,928,000	999,905
Palo Verde	PV	24,300	Note 1	24,300	45,000	20,700
Marana Airport	X	17,820	330,000	347,820	500,000	152,180

Notes: 1. Palo Verde Water System does not have a fire flow requirement.

All the zones have excess storage capacity except for the Picture Rocks CR and PR-Zones, which have a deficiency of 337,105 gallons, and North Marana Water System, which has a deficiency of 469,870 gallons.

5.3. Existing Well Capacity

The minimum required well capacity is equal to PDD with the largest well out of service; however, the Tangerine Business Park Water System and the Palo Verde Water System do not require redundant well capacity and each is served by a single well. **Table 8** shows the current well capacity requirement, the existing well capacity, and the amount of excess capacity for each pressure zone.

Table 8. Existing Well Capacity

Water System	Required Capacity (gpm)	Total Well Capacity (gpm)	Largest Well (gpm)	Net Well Capacity (gpm)	Excess Well Capacity (gpm)
North Marana	2,045	2,721	1,009	1,712	(333)
Tangerine Business Park	5	55	Note 1	55	50
Picture Rocks	1,033	2,411	1,374	1,037	4
Hartman Vistas	884	2,590	986	1,604	720
Saguaro Bloom	637	1,522	1,100	422	(215)
Palo Verde	23	273	Note 2	273	250
Marana Airport	17	4,034	2,034	2,000	1,983

Notes: 1. Under current Marana Water policy, the Tangerine Business Park Water System does not require a redundant well.
2. Under current Marana Water policy, the Palo Verde Water System does not require a redundant well.

The North Marana Water System has a source deficiency of 333 gpm, and the Saguaro Bloom Water System has a source deficiency of 215 gpm.

5.4. EXISTING BOOSTER CAPACITY

The booster capacity requirement is the greater of PHD or PDD plus fire flow. If the pressure zone is served by gravity storage (Twin Peaks Y and Z Zones), then the booster capacity requirement is the combined PDD of the zones downstream of the current zone. **Table 9** shows the required booster capacity, the existing booster capacity, and the excess booster capacity for each zone. There is currently one booster deficiency of 446 gpm in the Picture Rocks CR Zone.

Table 9. Existing Booster Capacity

Water System	Zone	Required Booster Capacity (gpm)	Existing Booster Capacity (gpm)	Excess Booster Capacity (gpm)
North Marana	W+	4,847	5,520	673
	X	1,073	1,300	227
Tangerine Business Park	Y	1,755	1,850	95
Picture Rocks	CR	3,746	3,300	(446)
	PR	787	1,900	1,113
	Y	2,543	3,100	557
	Z	1,032	1,320	288
Hartman Vistas	Y	434	2,100	1,666
	Y+	258	2,100	1,842
	Z	1,135	2,500	1,365
	A	1,557	1,850	293
	A+			
Saguaro Bloom	X	2,637	4,430	1,793
Palo Verde	X	145	308	163
Airport	X	2,767	3,205	438

6. PROJECTED CAPACITY REQUIREMENTS AND UTILIZATION OF EXISTING FACILITIES

This section includes the projected capacity requirements and utilization of existing infrastructure over the 10-year study period ending in 2032. Water system infrastructure requirements are based on the level of service noted in **Section 3.2**.

6.1. PROJECTED 10-YEAR EDUS

The future land use from **Table 2** in **Section 4** was combined with the Water Systems and water pressure zones from **Figure 2**. The results were added to the existing EDUs from **Table 5** in **Section 5** to get the total EDUs by water pressure zone. The results are presented in **Table 10**.

Table 10. Projected Equivalent Dwelling Units

Water System	Water Pressure Zone	Existing EDUs	Projected Growth, EDU[1]		Existing and Projected10-Year EDUs
			2023-2027	2028-2032	
North Marana	W+	5,259	3,037	2,908	11,204
	X-north	195			195
	X-south		932	1,720	2,652
Tangerine Business Park	Y	14	20	8	42
	X	0	196		196
Picture Rocks	CR	2,322	88	4	2,414
	Z	86			86
	PR	233			233
	Y	114			114
Hartman Vistas	Y	1,158	535	518	2,211
	Y+	687	156		843
	Z	359	155	48	562
	A	62	58	10	130
	A+	91	50		141
	B		82	25	107
	C			219	219
Saguaro Bloom	X	1,699	850		2,549
Palo Verde	PV	60	0		60
Marana Airport	X	44	20	20	84
Total		**12,383**	**6,179[1]**	**5,480[1]**	**24,042**

[1] Does not include IGA projection growth.

6.2. PROJECTED DEMANDS

Table 11 shows the projected demands for each water pressure zone. Projected demands are ADD, PDD, and PHD.

Table 11. Projected Demands

Water System	Water Pressure Zone	Average Day Demand (gpd)	Peak Day Demand (gpm)	Peak Hour Demand (gpm)
North Marana	W+	3,025,080	4,202	6,302
	X-north	52,650	73	128
	X-south	716,040	995	1,740
Tangerine Business Park	Y	11,340	90	28
	X	52,920	74	129
Picture Rocks	CR	651,780	905	1,584
	Z	23,220	32	56
	PR	62,910	87	153
	Y	30,780	43	75
Hartman Vistas	Y	596,970	829	1,451
	Y+	227,610	316	553
	Z	151,740	211	369
	A	35,100	49	85
	A+	38,070	53	93
	B	28,890	40	70
	C	59,130	82	144
Saguaro Bloom	X	688,230	956	1,673
Palo Verde	PV	16,200	23	39
Marana Airport	X	22,680	32	55
Total		**6,491,340**	**9,090**	**14,727**

6.3. PROJECTED STORAGE CAPACITY

The minimum storage reservoir requirement is equal to 1.5 times ADD plus fire flow. There are no plans to add fire flow requirements to the Palo Verde Water System, therefore its reservoir requirement is 1.5 times ADD. If storage is for more than one zone, the highest fire flow requirement of the multiple zones is used to calculate the storage requirement.

Table 12 shows the projected storage reservoir requirement, the existing reservoir capacity, and the amount of excess capacity for each pressure zone. Excess storage in a red font and parenthesis indicates a negative value, which means a deficiency in storage. It is projected that the North Marana Water System will have a 3,951,655-gallon storage deficiency, the Picture Rocks Water System will have a 374,365-gallon storage deficiency and the Hartman Vistas Water System will have a 281,265-gallon storage deficiency.

Table 12. Projected Storage Capacity

Water System	Water Pressure Zone	Required Storage (gallons)	Existing Storage (gallons)	Excess Storage (gallons)
North Marana	W+, X	5,690,655	2,084,000	(3,951,655)
Tangerine Business Park	X, Y	96,390	500,000	193,610
Picture Rocks	CR, PR, Z	1,106,865	1,250,000	(374,365)
	Y	46,170	1,000,000	653,830
Hartman Vistas	All	1,706,265	2,385,000	(281,265)
Saguaro Bloom	X	1,032,345	1,928,000	655,655
Palo Verde	PV	24,300	45,000	20,700
Marana Airport	X	34,020	500,000	135,980

6.4. PROJECTED WELL CAPACITY

The minimum required well capacity is equal to PDD with the largest well out of service; however, the Tangerine Water System and the Palo Verde Water System will not require redundant well capacity by 2032. **Table 13** shows the projected well capacity requirement, the existing well capacity, and the projected excess capacity for each pressure zone. Excess well capacity in a red font and parenthesis indicates a negative value, which means a deficiency in well capacity. The North Marana Water System will have a 3,557-gpm deficiency, the Tangerine Business Park Water System will have a 35-gpm deficiency, the Picture Rocks Water System will have a 31-gpm deficiency, and the Saguaro Bloom Water System will have a 533-gpm deficiency.

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Table 13. Projected Well Capacity

Water System	Water Pressure Zone	Required Well Capacity (gpm)	Total Existing Well Capacity (gpm)	Largest Well (gpm)	Net Well Capacity (gpm)	Excess Well Capacity (gpm)
North Marana	W+	**4,202**	2,721	1,009	1,712	(3,557)
	X-north	73				
	X-south	995				
Tangerine Business Park	Y, X	90	55	Note 1	55	(35)
Picture Rocks	CR	905	2,411	1,374	1,037	(31)
	Z	32				
	PR	87				
	Y	43				
Hartman Vistas	Y	829	2,590	986	1,604	357
	Y+	316				
	Z	211				
	A	49				
	A+	53				
	B	40				
	C	82				
Saguaro Bloom	X	956	1,522	1,100	422	(534)
Palo Verde	PV	23	273	Note 2	273	251
Marana Airport	X	32	4,034	2,034	2,000	1,969

Notes 1. Tangerine Business Park Water System does not have redundant well requirement.
2. Palo Verde Water System does not have redundant well requirement.

6.5. PROJECTED BOOSTER CAPACITY

The booster capacity requirement is the greater of PHD or PDD plus fire flow. If the pressure zone is served by gravity storage (Hartman Vistas Y, Y+, and Z-Zones), then the booster capacity requirement is the combined PDD of the zones downstream of the zone being evaluated. **Table 14** shows the projected required booster capacity, the existing booster capacity, and the excess booster capacity for each zone. Excess booster capacity in a red font and parenthesis indicates a negative value, which means a deficiency in well capacity.

Table 14. Projected Booster Capacity

Water System	Water Pressure Zone	Fire Flow (gpm)	Required Booster Capacity (gpm)	Existing Booster Capacity (gpm)	Excess Booster Capacity (gpm)
North Marana	W+	2875	7,077	5,520	(1,557)
	X-north	1,000	1,073	1,300	227
	X-south	2,000	2,995	3,000	5
Tangerine Business Park	Y, X	1,750	1,914	1,850	(64)
Picture Rocks	CR	2,875	3,813	3,300	(513)
	Z	1,000	1,032	1,320	288
	PR	700	830	1,900	1,070
	Y	2,500	2,543	3,100	557
Hartman Vistas	Y	4,000	829	2,100	1,271
	Y+	1,500	316	2,100	1,784
	Z	1,000	2,103	2,500	397
	A	1,500	1,892	1,580	(42)
	A+	1,500			
	B	1,000	1,122	0	(1,122)
	C	1,000	1,082	0	(1,082)
Saguaro Bloom	X	2,000	2,956	4,780	1,474
Palo Verde	PV	N/A	145	308	163
Marana Airport	X	2,750	2,782	3,205	424

It is projected that four water systems will have booster deficiencies: North Marana Water System, Tangerine Business Park Water System, Picture Rocks Water System, and Hartman Vistas Water System.

6.6. Other Distribution System Deficiencies

In addition to having adequate storage capacity, well capacity, and booster capacity, the distribution system must have adequate capacity to move water to the projected development areas while maintaining a minimum of 20 psi throughout the system. There are projected distribution system deficiencies in the North Marana Water System and the Hartman Vistas Water System. It is projected that an increased pipe capacity is required to connect the southern and northern portions of the North Marana Water System along Sanders Road. Developments in the Hartman Vistas will require a distribution pipe from the proposed B-Zone booster.

6.7. Additional Renewable Resource Acquisitions

An average of 270 gpd (approximately 0.3 acre-feet/year) of renewable water resources is required for each EDU. **Table 15** shows the projected additional renewable water resource required for each

benefit area. Projected growth over the next 10 years will require approximately 3,662 acre-feet (per year) of additional renewable water resource acquisitions.

Table 15. Projected Additional Renewable Resources Required for 2032

Benefit Area	Projected Growth (EDU)	Renewable Resource (acre-feet)
North Marana	8,821	2,646
Twin Peaks	1,988	596
Saguaro Bloom	850	255
Palo Verde	0	0
IGA	546	164
Total	**12,205**	**3,662**

6.8. SUMMARY OF PROJECTED CAPACITY DEFICIENCIES

Table 16 contains a summary of the projected infrastructure deficiencies in storage, well, and booster capacity for each benefit area. In addition to the infrastructure deficiencies shown in **Table 16**, 3,662 acre-feet of renewable water resources will be required to offset the ADWR safe yield requirements.

Table 16. Summary of Projected Infrastructure Deficiencies by Benefit Area

Benefit Area	Storage Capacity Deficiency (gallons)	Well Capacity Deficiency (gpm)	Booster Capacity Deficiency (gpm)	Other Deficiencies
North Marana	3,951,655	3,592	1,621	Note 1
Twin Peaks	655,630	0	2,759	Note 2
Saguaro Bloom		534		

1 North Marana Benefit Area will not meet the 20-psi pressure requirement for all flow conditions.
2 Twin Peaks Benefit Area will require new delivery pipeline from proposed B-Zone Booster.

7. CAPITAL INFRASTRUCTURE IMPROVEMENTS

Figure 7 shows the location of the 15 capital projects that are intended to make up the projected deficiencies discussed in **Sections 7.3** through **7.6.** The capital projects make up projected deficiencies in two of the defined benefit areas. Projects that are associated with water resources acquisition are presented in **Section 9.2**. **Table 17** shows each project, the benefit area or areas benefiting from each project, and the projected EDUs affected by the project. See **Section 3** for the level of service associated with each benefit area.

Table 17. Proposed Capital Improvements

Capital Improvement Project	Benefit Area Affected					Total Benefit EDUs
	North Marana	Twin Peaks	Saguaro Bloom	Palo Verde	IGA	
Airport Connection to NWRRDS Pipeline	✓	✓				10,809
Partnered NWRRDS Project	✓	✓				10,809
Marana Booster at NWRRDS	✓	✓				10,809
NWRRDS Blending Plan	✓	✓				10,809
B-Zone Booster and Transmission Line	✓	✓				10,809
B-Zone Reservoir	✓	✓				10,809
C-Zone Booster		✓				1,988
Tangerine 16" with Break Tanks	✓					8,821
Tangerine 16" at I-10	✓					8,821
Marana Park Well	✓					8,821
Marana Park Reservoir	✓					8,821
Sanders Road 24” Pipeline	✓					8,821
Twin Peaks Interconnect		✓				1,988
Picture Rocks Interconnect		✓				1,988
Honea East Improvements	✓					8,821
Heritage Park Water Plant	✓					8,821

Each of the projects is described in more detail in the following subsections. Seven of the projects create a loop that can move water from the Airport Water System to the Hartman Vistas Water System, the Tangerine Business Park Water System, and the North Marana Water System.

- Airport Connection to NWRRDS Pipeline
- Partnered NWRRDS Project
- Marana Booster at NWRRDS
- NWRRDS Blending Plan
- B-Zone Booster and Transmission Line
- B-Zone Reservoir
- Tangerine 16" with Break Tanks
- Tangerine 16" at I-10

The purpose of the loop is to address source (well) and storage deficiencies in the North Marana Benefit Area and the Twin Peaks Benefit area. Portions of the loop also address booster and delivery deficiencies in the Twin Peaks Benefit Area.

The Twin Peaks Interconnect and the Picture Rocks Interconnect combine to connect the existing Hartman Vistas Water System and the Picture Rocks Water System. The purpose of the Picture Rocks Interconnect is to adjust the zone boundaries, so the water pressure zones in the Picture Rocks Water System match the water pressure zones in the Hartman Vistas Water System. The purpose of the Twin Peaks Interconnect and the Picture Rocks Interconnect is to address the storage, well, and booster deficiencies in the Twin Peaks Benefit Area.

7.1. Airport Connection to NWRRDS Pipeline

The purpose of the Airport Connection to the Northwest Recharge, Recovery, and Delivery System (NWRRDS) Pipeline is to supply an average of 1,500 gpm from the Airport wells into the Partnered NWRRDS Project. The project includes a 1,500-gpm booster station, suction, and pressure side hydropneumatic tanks, upgrade of the existing booster station, upgrade of the existing southeast well, site piping, and controls.

As part of the loop connecting the Airport Water System to the North Marana Water System, this project benefits the North Marana and Twin Peaks Benefit Areas by addressing projected storage and well capacity deficiencies.

Fifty percent of the cost of the Airport Connection to the NWRRDS Pipeline will be assigned to the IIP.

7.2. Partnered NWRRDS Project

The Partnered NWRRDS Project is designed to take recovered recharged water from the area around the airport and deliver it to the three partners. The partners are Marana, Oro Valley, and Metro Water. The project includes a delivery pipeline and reservoir. Marana is responsible for 23 percent of the project cost, with 50 percent of Marana's portion being assigned to new development in this IIP.

The project includes a pipeline and one-million-gallon storage reservoir. Marana Water's portion of the storage reservoir is 230,000 gallons.

As part of the loop connecting the Airport Water System to the North Marana Water System, this project benefits the North Marana and Twin Peaks Benefit Areas by addressing projected storage and well capacity deficiencies.

7.3. MARANA BOOSTER AT NWRRDS

The Marana Booster at NWRRDS will transfer water from the Partnered NWRRDS Project reservoir to Marana Water's Hartman Vista Water System. The Marana Booster at NWRRDS consists of a 1,500-gpm booster station and water main to connect to the water system.

As part of the loop connecting the Airport Water System to the North Marana Water System, this project benefits the North Marana and Twin Peaks Benefit Areas by addressing projected storage and well capacity deficiencies.

Fifty percent of the cost of the Marana Booster at NWRRDS will be assigned to the IIP.

7.4. NWRRDS BLENDING PLAN

A blending plan, with an estimated cost of $120,000, is required to ensure water quality is not degraded after connection of the NWRRDS source.

Fifty percent of the cost of the NWRRDS will be assigned to the IIP.

7.5. B-ZONE BOOSTER AND TRANSMISSION LINE

The purpose of the B-Zone Booster and Transmission Line is to move water from the Blue Bonnet Reservoir north to the proposed B-Zone reservoir near Tangerine Road. B-Zone Booster and Transmission Line consists of a 3,000-gpm booster station and approximately 9,000 feet of 16-inch diameter water main.

As part of the loop connecting the Airport Water System to the North Marana Water System, this project benefits the North Marana and Twin Peaks Benefit Areas by addressing projected storage and well capacity deficiencies. This project also addresses projected booster and distribution deficiencies in the Twin Peaks Benefit Area.

7.6. B-ZONE RESERVOIR

The 210,000-gallon B-Zone Reservoir serves as part of the loop supplying the North Marana and Tangerine Business Park Systems, gravity storage for the B-Zone of the Hartman Vistas Water System, and as a forebay for the C-Zone Booster.

As part of the loop connecting the Airport Water System to the North Marana Water System, this project benefits the North Marana and Twin Peaks Benefit Areas by addressing projected storage and well capacity deficiencies.

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7.7. C-Zone Booster

The 1,200-gpm C-Zone Booster supports the Hartman Vistas Water System and consists of booster pumps and supporting equipment. This project addresses a projected booster deficiency in the Twin Peaks Benefit Area.

7.8. Tangerine 16" with Break Tanks

The Tangerine 16-inch with Break Tanks project consists of 16,750 feet of 16-inch diameter water main and two 50,000-gallon water storage reservoirs or break tanks. The Tangerine 16-inch with Break Tanks is part of the loop from the Airport Water System to the North Marana Water System.

As part of the loop connecting the Airport Water System to the North Marana Water System, this project benefits the North Marana Benefit Area by addressing projected well capacity deficiencies and storage deficiencies.

7.9. Tangerine 16" at Interstate-10

The Tangerine 16-inch at Interstate 10 project consists of 6,547 feet of 16-inch water main and is part of the loop connecting the Airport Water System to the North Marana Water System.

As part of the loop connecting the Airport Water System to the North Marana Water System, this project benefits the North Marana Benefit Area by addressing projected well capacity and storage deficiencies.

7.10. Marana Park Well

The proposed Marana Park 800-gpm well will provide groundwater to the North Marana Service Area and Tangerine Business Park Water System.

This project will benefit the North Marana Benefit Area by addressing projected well capacity deficiencies.

7.11. Marana Park Reservoir

The proposed Marana Park 1.5-million-gallon storage reservoir will address a portion of the storage deficiency in the North Marana Service Area.

This project will benefit the North Marana Benefit Area by addressing projected storage deficiencies.

Water rates will pay for $1,000,000 of the cost of the proposed Marana Park Reservoir.

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7.12. Sanders Road 24-inch Pipeline

The proposed Sanders Road 24-inch Pipeline will alleviate projected distribution system deficiencies in the North Marana Water System. The improvement will allow the movement of water from source wells and storage reservoirs to and from new development areas during peak use periods, while maintaining a minimum 20-psi pressure throughout the system.

This project will benefit the North Marana Benefit Area by addressing projected distribution system deficiencies.

7.13. Twin Peaks Interconnect

The proposed 24-inch Twin Peaks/Continental Reserve Interconnect will connect the Hartman Vistas and Picture Rocks Service Areas. The design has been completed and only the construction costs are included.

This project addresses projected storage and well capacity deficiencies in the Twin Peaks Benefit Area.

7.14. Picture Rocks Interconnect

The proposed Twin Peaks/Continental Reserve Interconnect will require a change in the pressure zone boundary between the Picture Rocks CR and PR pressure zones as the majority of the CR pressure zone becomes a Y pressure zone. With the connection of the two areas, the water pressure of about 222 existing customers would fall below the 40-psi minimum pressure during normal flow conditions. The proposed Picture Rocks Interconnect is required to maintain the existing level of service for existing customers that would be affected by the proposed Twin Peaks/Continental Reserve Interconnect.

This project addresses storage and projected well capacity deficiencies in the Twin Peaks Benefit Area.

7.15. Honea East Well

The Honea East Well project consists of reequipping the well with a new pump and motor to increase the well capacity by 250 gpm.

This project will benefit the North Marana Benefit Area by addressing projected well capacity deficiencies.

7.16. HERITAGE PARK WATER PLANT

The Heritage Park Water Plan Project consists of 1,800,000-gallon storage reservoir, a 1,000-gpm well, and a 1,200-gpm booster. The project will benefit the North Marana Benefit Area by addressing projected storage, well, and booster deficiencies.

8. COST OF CAPITAL IMPROVEMENTS AND WATER RESOURCE ACQUISITIONS

This section covers costs associated with infrastructure, water rights acquisitions, and Section 23 fees.

8.1. INFRASTRUCTURE

The discussion of infrastructure costs is divided into three sections: 1) the cost associated with planning for growth, 2) reimbursements for existing infrastructure, and 3) the costs associated with the capital infrastructure improvements presented in **Section 7**.

8.1.1. Planning

An update of the 2020 Potable Water Master Plan of the Marana water system will be completed in 2030 at an estimated cost of $150,000. Master planning is performed periodically to plan for future growth.

8.1.2. Reimbursements

There are existing reimbursements required for the construction of infrastructure in the Hartman Vistas Water System, which comprises the Hartman Vistas Water System. The infrastructure was financed by the Town and $1,330,210 in debt service payments are required during the 10-year impact fee period.

8.1.3. Infrastructure

Appendix A contains a detailed cost breakdown for each capital improvement. **Table 18** contains the portion of the capital improvement cost assigned to the impact fee and the period the cost will be realized. The second column contains the cost breakdown for years 2023 through 2027, and the third column contains the cost breakdown for years 2028 through 2032.

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Table 18. Portion of Improvement Costs Assigned to Impact Fee

Capital Project	2023-2027	2028-2032
50% Airport Connection to NWRRDS Pipeline[1]	$2,025,081	
50% Partnered NWRRDS Project[1]	$3,735,894	
50% Marana Booster at NWRRDS[1]	2,107,775	
50% Blending Plan[1]	$60,000	
B-Zone Booster and Transmission Line		$4,413,278
B-Zone Reservoir		$617,700
C-Zone Booster		$1,819,375
Tangerine 16" with Break Tanks		$5,307,960
Tangerine 16" at I-10	$2,634,128	
Marana Park Well	$991,302	
Marana Park Reservoir[2]	$3,566,723	
Sanders Road 24" Pipeline		$4,878,502
Twin Peaks Interconnect	$2,901,250	
Picture Rocks Interconnect		$1,554,163
Honea East Well	$216,550	
Heritage Park Water Plant	$5,328,123	
Water Master Plan		$150,000
Blending Plan	$120,000	
Total	**$23,686,826**	**$18,740,978**

[1]50 percent of OPCC applied to IIP
[2]$1,000,000 of the cost of the Marana Park Reservoir will be paid by water rates.

8.2. RENEWABLE WATER RESOURCE ACQUISITIONS

Currently, there are three sources of renewable water resources foreseen in the next 10 years: Reallocated Non-Indian Agricultural (NIA) Priority Central Arizona Project (CAP) water, Municipal and Industrial (M&I) Priority CAP water, and effluent from two sources: the Marana Water Reclamation Facility (WRF) and Pima County's Tres Rios WRF.

The Town is a member service area of the Central Arizona Groundwater Replenishment District (CAGRD). Reliance on the CAGRD is an important alternative and backstop to the Town acquiring its own supplies. However, the Town having direct control and ownership of its water supplies is more beneficial and cost effective.

8.2.1. Integrated Water Resources Plan

An Integrated Water Resources Plan will be completed during the 2023 through 2032 period for a cost of $435,000, which will be applied to all benefit areas. The Integrated Water Resources Plan will produce a long-term planning report to provide comprehensive guidelines for water supply, support modification to the Town's designation of assured water supply, support acquisition of additional renewable water supplies as needed, and support external communications regarding water resources.

8.2.2. Water Resource Acquisition

Water resource impact fees are applied to new development in all the benefit areas including the IGA Benefit Area. The projected growth from 2023 to 2032 is 12,205 EDUs. **Table 19** shows the water required for existing customers and future growth, the existing renewable supplies, the renewable water resources available due to the projects included in the IIP for each year from 2023 through 2032, and the renewable supplies that will need to be purchased by IIP projects.

Existing renewable resources are recognized in the Town's designation of assured water supply and include an entitlement to 2,336 acre-feet per year of M&I Priority CAP water, the incidental recharge ADWR will credit to the Town's groundwater allowance based on 4 percent of existing demand, long-term storage credits held at the start of 2020 (assuming average annual use over 100 years) and Marana WRF effluent (discussed further below). While not included in the designation of assured water supply, the Town also anticipates using its entitlement to Tres Rios WRF effluent to supply existing and future customers. The effluent entitlement is based on deliveries to customers within the Tres Rios sewershed and is used to accrue storage credits in the Lower Santa Cruz River Managed Recharge Project (LSCRMRP).

Acquisitions include estimated volume of recharged effluent from the Marana WRF (calculated based on existing and future EDUs contributing to Marana WRF influent) and supplies to cover the remaining renewable resource required (discussed below).

Table 19. Renewable Resource Requirements and Sources for Impact Fee Period

Year	Water Required (acre-feet)	M&I Priority CAP Water (acre-feet)	Incidental Recharge Credit to Groundwater Allowance (acre-feet)	Long-Term Storage Credits (acre-feet)	Marana WRF Effluent	Tres Rios Effluent (acre-feet)	Remaining Renewable Resource Required (acre-feet)
2023	4,109	2,336	163	148	1,680	152	(370)
2024	4,509	2,336	174	148	1,680	161	10
2025	4,910	2,336	186	148	1,680	169	391
2026	5,311	2,336	195	148	1,680	176	776
2027	5,712	2,336	205	148	1,680	182	1,161
2028	6,043	2,336	215	148	1,680	189	1,475
2029	6,374	2,336	225	148	3,361	195	109
2030	6,707	2,336	235	148	3,361	202	425
2031	7,039	2,336	282	148	3,361	209	703
2032	7,371	2,336	295	148	3,361	216	1,015

In 2012, the Town purchased a 0.5 million gallon per day (mgd) Biolac® secondary treatment system form Pima County with a total of $34,527,164 including debt service. Since the Marana WRF was

acquired for water reclamation as well as water resource recovery, future water customers will pay for one-half the cost of the acquisition plus debt service, and future sewer customers will pay for one-half the acquisition plus debt service.

In 2018, a 1.5-mgd expansion to the Marana WRF was constructed, including replacement of the existing 0.5-mgd Biolac® secondary treatment system. Since the Marana WRF was acquired for water reclamation as well as water resource recovery, future water customers will pay for one-half the cost of the expansion and associated debt service, and future sewer customers will pay for one-half the cost of the expansion and associated debt service.

To account for the contributions made by the current customer base toward the existing utilized capacity in the Biolac® secondary treatment system and acquisition of the WRF, the Town has contributed approximately $3.0 million toward the cost to finance the expansion. This funding provided by the Town was not included and will not be reimbursed by new customers through impact fees. Additionally, while the Biolac® will not be utilized as part of the secondary treatment process in the current expansion of the WRF, it will not be clean closed at the time of the expansion to allow further consideration for its proposed future use.

A second WRF plant expansion is scheduled to start in 2024 with a design cost of $2,900,823, half of which will be assigned to the water resource fee ($1,450,411.50). Construction is scheduled to begin in 2027 with an estimated construction cost of $36,260,290, half of which plus debt service will be assigned to the water resource fee, and half will be assigned to water reclamation fee ($18,130,145).

Recharge basins were constructed for Marana WRF effluent. The recharge basins allow purified water to be recharged, and to then become available as groundwater recharge credits to offset groundwater pumping. Therefore, half of the cost, plus debt service will be assigned to the water resource fee, and half will be assigned to water reclamation fee. The total cost of the recharge basins was $2,966,493.

An expansion of the recharge basins is planned during the next ten years and is projected to cost $4,004,766.

The remaining renewable resource required to meet growth is 1,015 acre-feet, which will be supplied by two sources: 1) the purchase of NIA CAP water and 2) the purchase of another source or sources that have not been determined.

An NIA allocation of 515 acre-feet will be purchased; however, availability from year to year is uncertain. In 2012, ADWR estimated NIA supply as 43 to 67% available, with zero supply in some years. On March 2, 2021, CAP staff presented updated information related to contracting and availability for NIA. CAP presented that forecasting the future availability of NIA is not possible due to several factors, each of which has considerable uncertainty. However, staff from CAP presented

modeling scenarios and assumptions that indicated that over the next 25 years, the NIA may be only 18% available (averaging model traces with unfavorable assumptions) or may be up to 83% available (at the upper end of favorable assumptions). The average modeling results indicate availability between 44 and 63% and the mean for all modeled traces was presented as 47% available (CAP 2021).

Assuming NIA has a 47% availability, the 515 acre-feet of NIA water will cover 242 acre-feet of the remaining renewable resource requirement of 1,015 acre-feet of renewable resource. NIA water has a cost of $1,072,743 spread over 5 years.

The current market cost for renewable water is $11,000 to $12,000 per acre-foot for a 100-year lease of the water based upon current negotiations between several Arizona Municipalities and entities owning groundwater outside of the AMA that have the legal right to deliver groundwater into the AMA. For the remaining 773 acre-feet required, an assumed cost of $11,500 per acre-foot was used to calculate a cost for the IIP. The total cost for 773 acre-feet of renewable water or equivalent long-term storage credits, based on $11,500 per acre-foot is $8,889,500. Purchases will be made as supplies are available and contracts are negotiated. The costs of capital projects that are particularly designed and constructed to generate long-term water credits shall also be considered as eligible expenses for water resources acquisition.

8.3. SECTION 23 FEES

Pursuant to an IGA between Marana and Oro Valley dated April 3, 2001 (Marana Resolution 2001-36), Marana and Oro Valley share an overlapping service area. The area of overlap is shown in **Appendix B**, and is located within a portion of Section 23, Township 12 South, Range 12 East. Connections in the overlap area pay a fee in addition to the Twin Peaks Benefit Area impact fee. The additional fee was $750 per EDU in 2001 and has increased by 3% per year every year thereafter. **Table 20** shows the fee over the next 10 years to the nearest dollar.

Table 20. Additional Section 23 Fees by Year

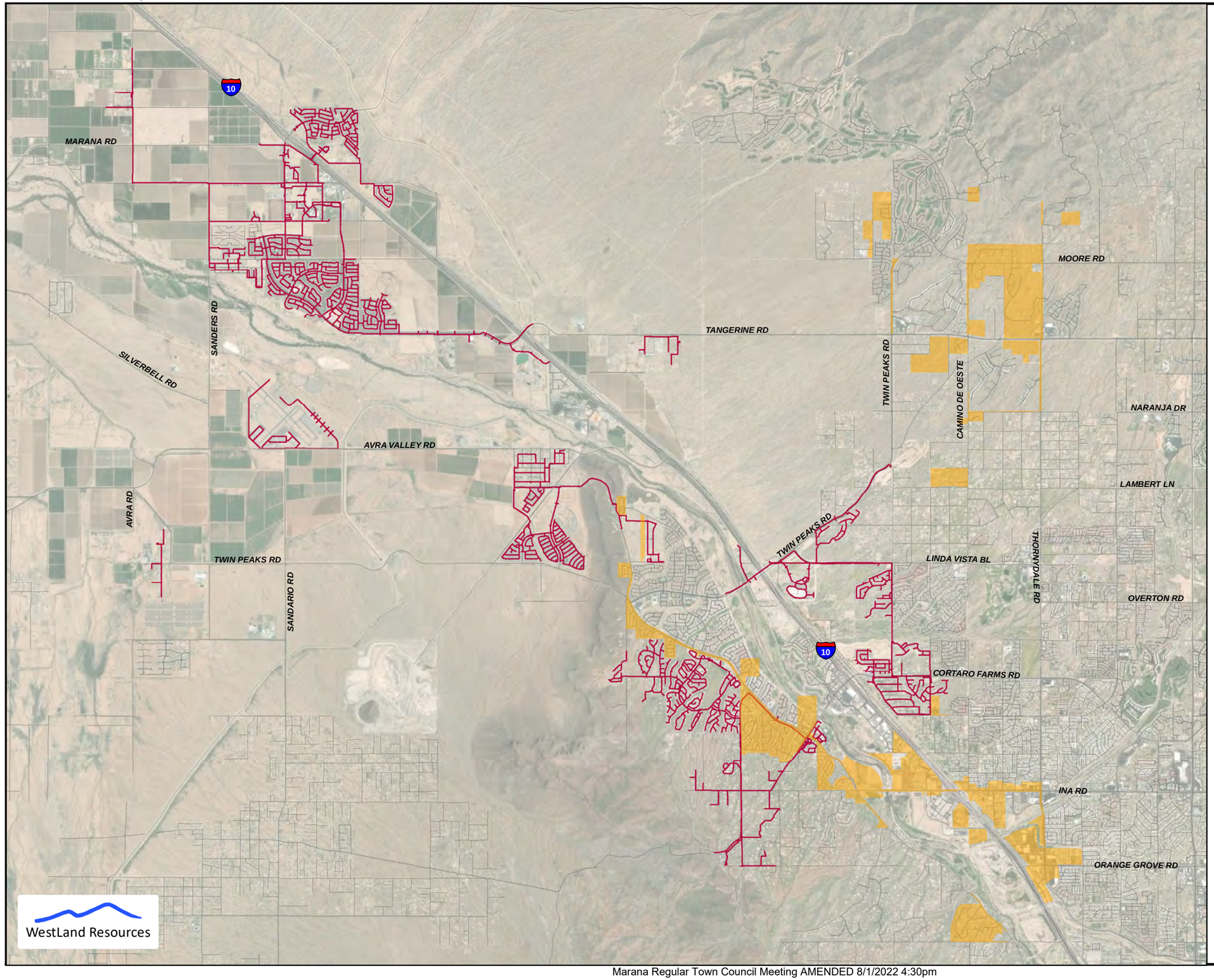
Year	Section 23 Fee	Year	Section 23 Fee
2023	$1,437	2028	$1,666
2024	$1,480	2029	$1,715
2025	$1,525	2030	$1,767
2026	$1,570	2031	$1,820
2027	$1,617	2032	$1,875

9. REFERENCES

Central Arizona Project (CAP). 2021. Stakeholder Meetings: NIA Briefing – March 2, 2021. https://www.cap-az.com/stakeholer-meetings. Accessed June 9, 2021.

FIGURES

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Legend

- Water Mains
- Streets
- IGA Areas

IGA Areas Include:

1) Marana Water Wheeling Service Area

2) Tucson Water Non-Contracted Service Area

N

0 3,000 6,000 Feet

0 800 1,600 Meters

MARANA AZ

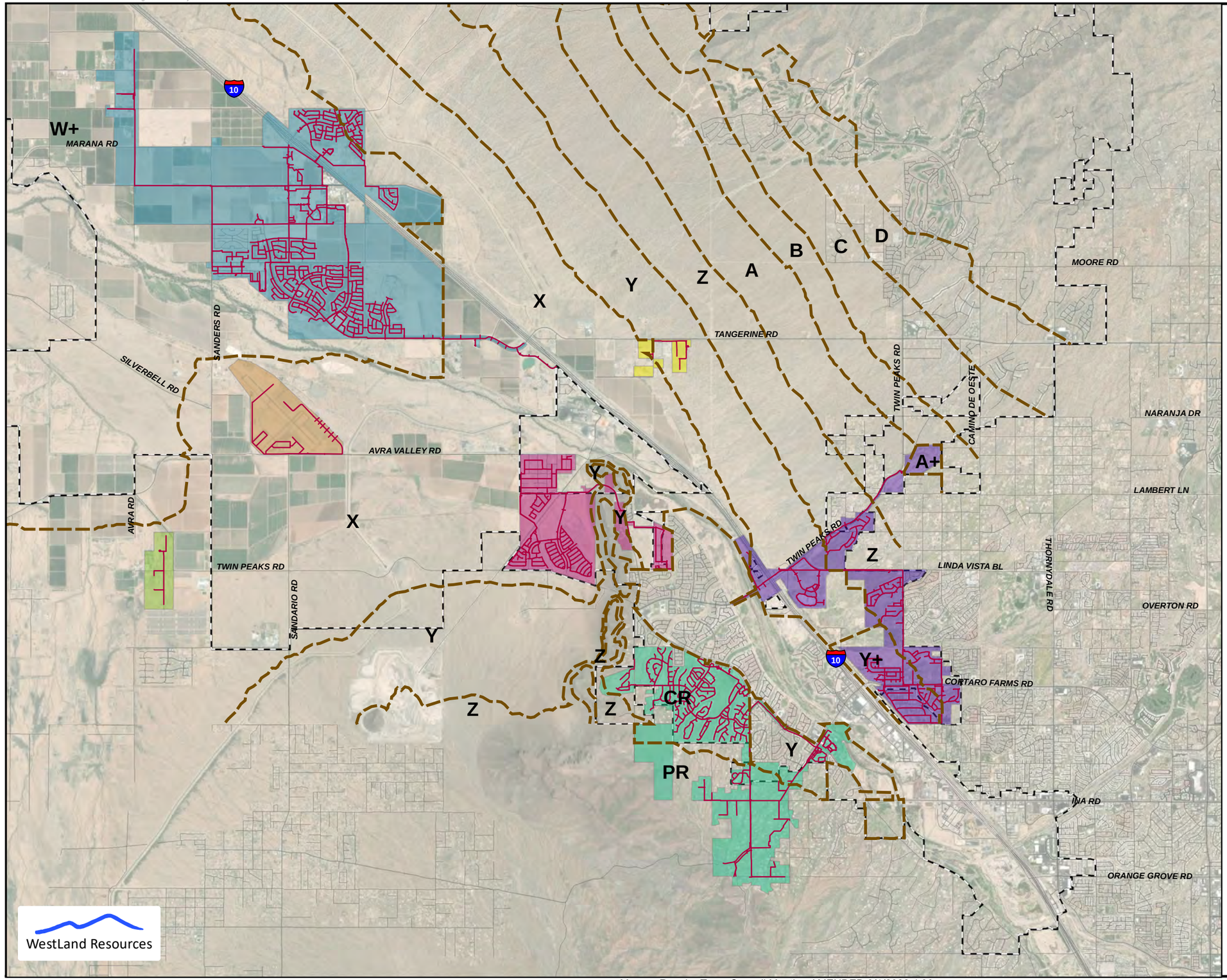
MARANA WATER DEPARTMENT

2022 Infrastructure Improvement Plan

EXISTING WATER SERVICE AREA

Figure 1

WestLand Resources



Legend

Water System

- Saguaro Bloom
- Hartman Vistas
- Marana Airport
- North Marana
- Palo Verde
- Picture Rocks
- Tangerine Business Park
- Pressure Zone Boundary
- W+ Pressure Zone
- Water Mains
- Marana Town Limits
- Streets

N

0 3,000 6,000 Feet

0 800 1,600 Meters

MARANA AZ

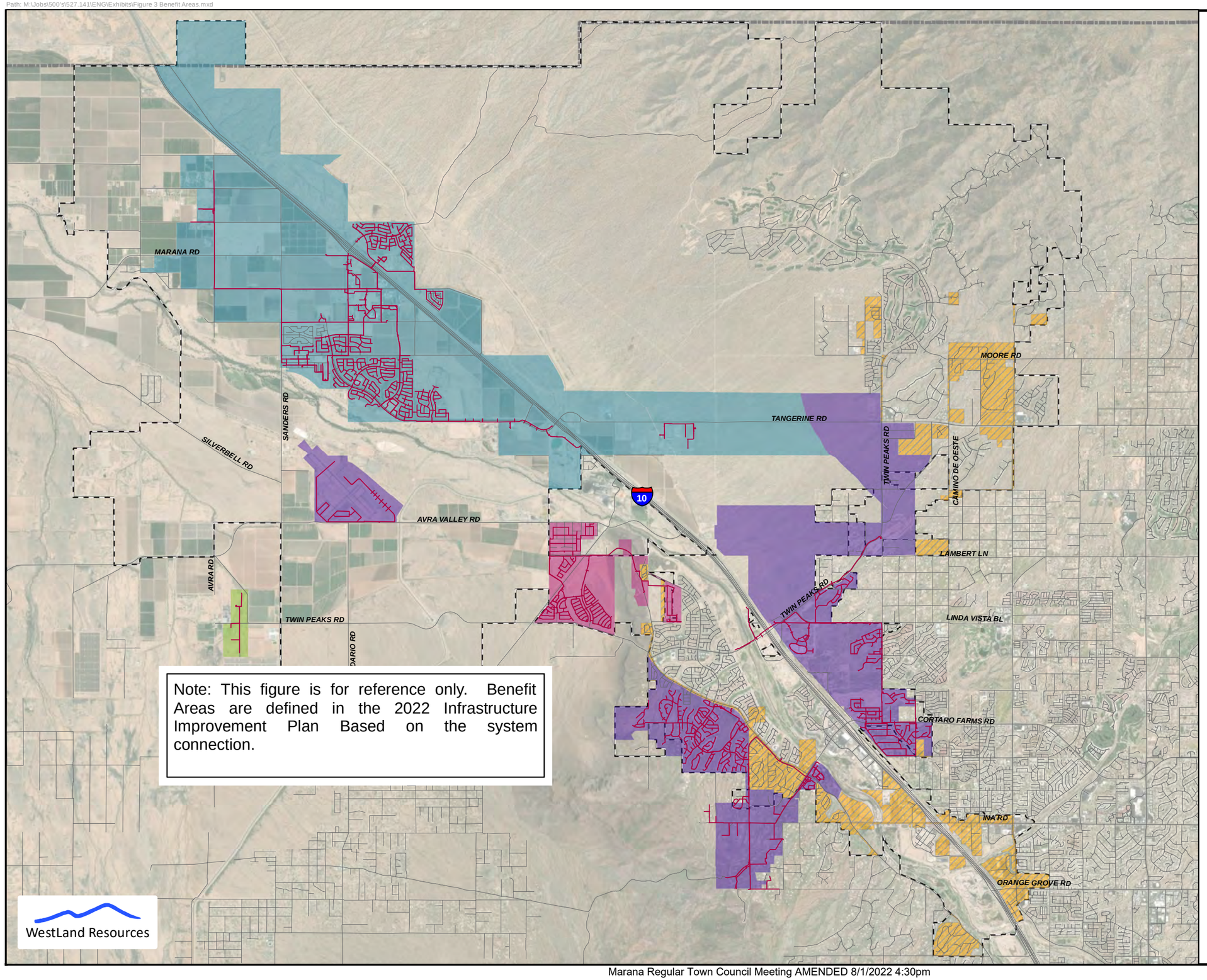
MARANA WATER DEPARTMENT

2022 Infrastructure Improvement Plan

EXISTING WATER SYSTEMS & PRESSURE ZONES

Figure 2

WestLand Resources



Note: This figure is for reference only. Benefit Areas are defined in the 2022 Infrastructure Improvement Plan Based on the system connection.

WestLand Resources

Legend

Benefit Area

- IGA
- North Marana
- Palo Verde
- Twin Peaks
- Saguaro Bloom
- Water Mains
- Marana Town Limits
- Streets

N

0 3,000 6,000 Feet

0 800 1,600 Meters

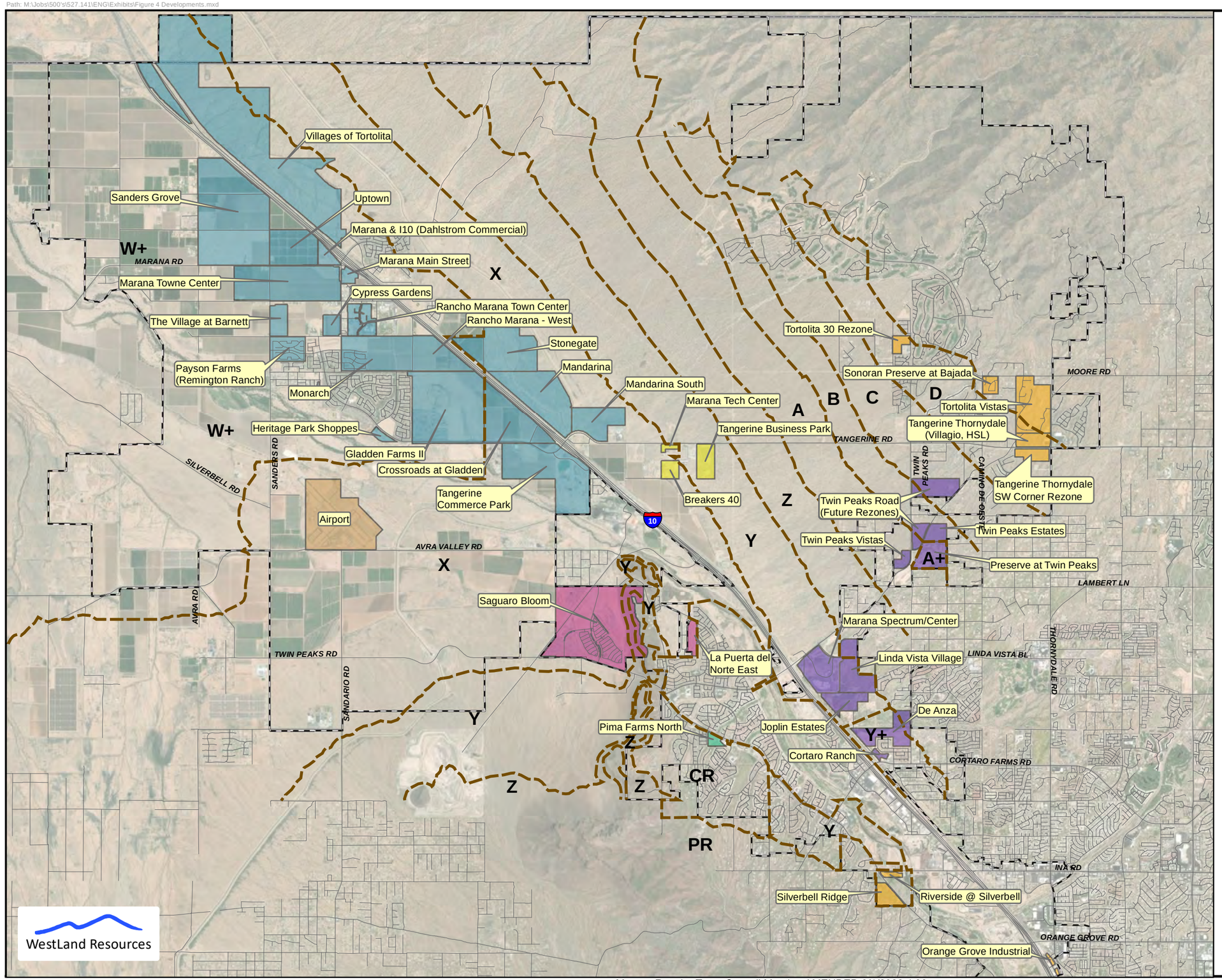
MARANA AZ

MARANA WATER DEPARTMENT

2022 Infrastructure Improvement Plan

BENEFIT AREAS

Figure 3



Legend

- Marana Town Limits
- Streets

Planned Developments

Water System

- Saguaro Bloom
- Hartman Vistas
- IGA
- Marana Airport
- North Marana
- Picture Rocks
- Tangerine Business Park
- Pressure Zone Boundary

N 0 3,000 6,000 Feet
0 800 1,600 Meters

MARANA AZ

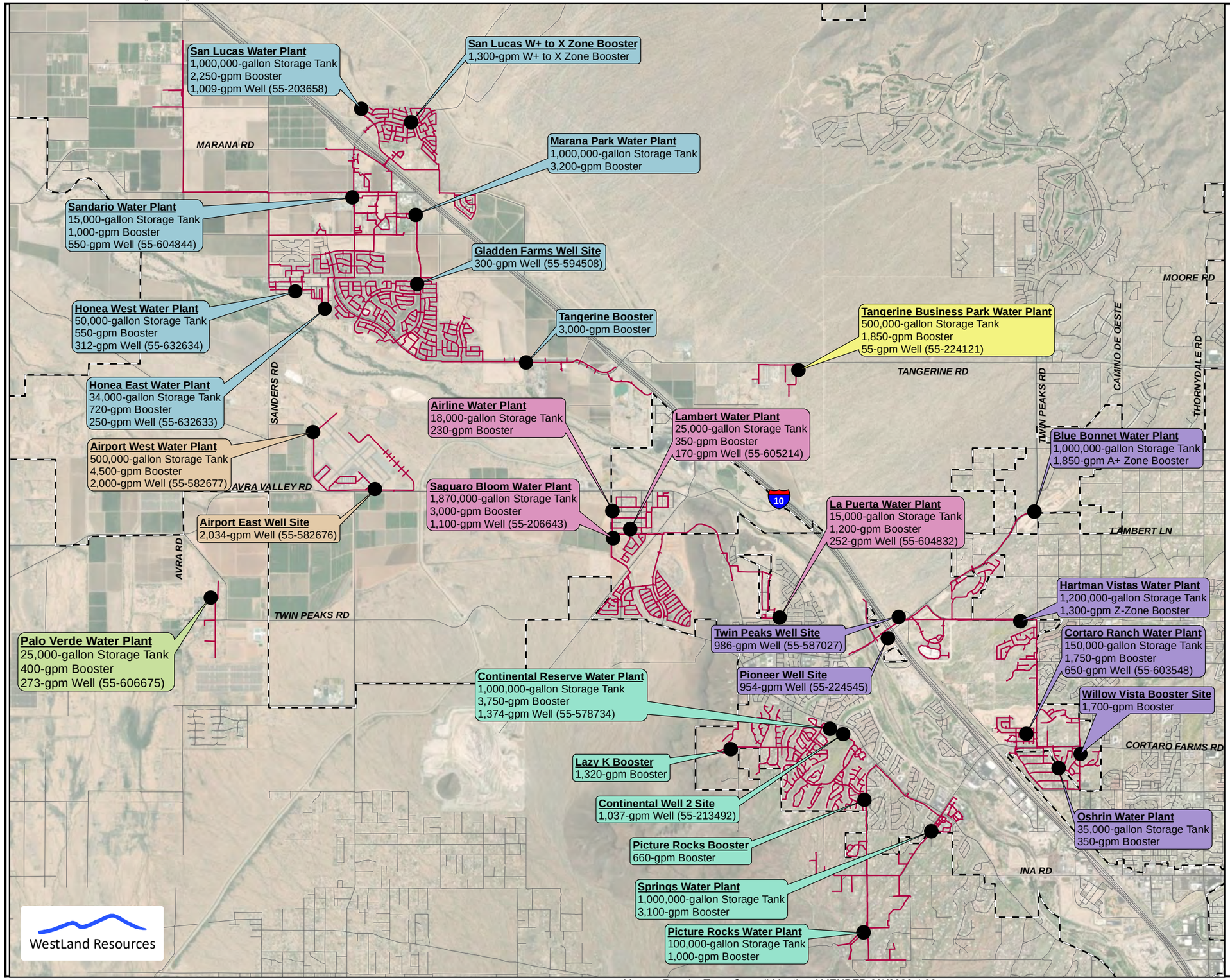
MARANA WATER DEPARTMENT

2022 Infrastructure Improvement Plan

PLANNED DEVELOPMENT AREAS

Figure 4

WestLand Resources



Legend

- Water Plants and Wells
- Water Mains
- Marana Town Limits

Label Color by Water System

- North Marana
- Picture Rocks
- Hartman Vistas
- Saguaro Bloom
- Palo Verde
- Marana Airport
- Tangerine Business Park

N

0 3,000 6,000 Feet

0 800 1,600 Meters

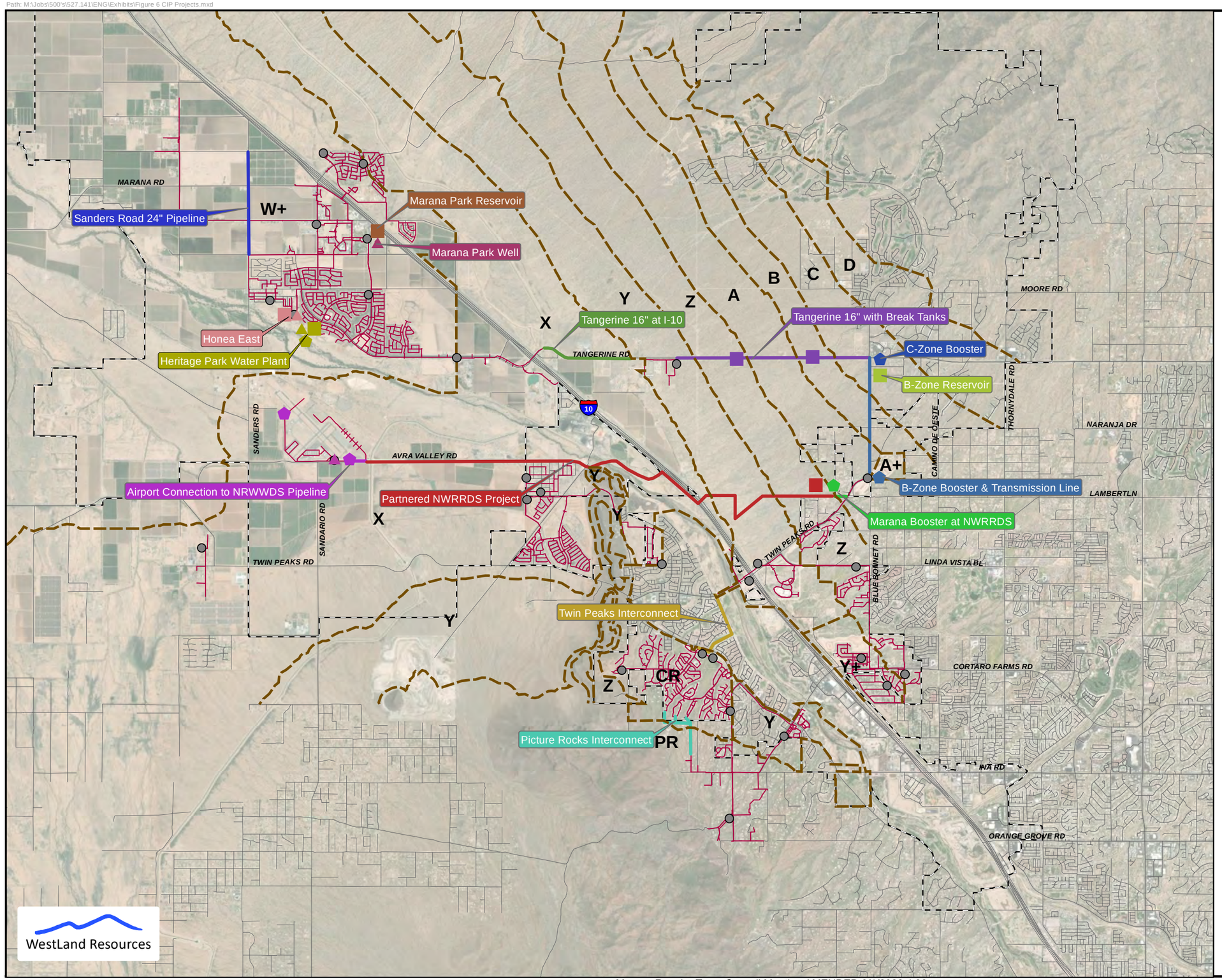
MARANA AZ

MARANA WATER DEPARTMENT

2022 Infrastructure Improvement Plan

EXISTING INFRASTRUCTURE

Exhibit 5



Legend

- Water Mains
- Marana Town Limits
- Streets
- Pressure Zone Boundary

Existing Water Plants

Proposed Infrastructure

- Well
- Reservoir
- Booster

N

0 3,000 6,000 Feet

0 800 1,600 Meters

WestLand Resources

MARANA AZ

MARANA WATER DEPARTMENT

2022 Infrastructure Improvement Plan

CAPITAL IMPROVEMENT PROJECTS

Figure 6

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APPENDIX A

Opinions of Probable Construction Cost and Site Plans

Project Name:	Marana CIP			**Prepared by:**	EDC	**Date:**	4/8/22
Project No.	527.141			**Checked by:**		**Date:**	3/1/22
Location:	Town of Marana, AZ			**Client:**	Town of Marana		
Description:	Airport Connection to NWRRDS Pipeline						

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	Mobilization	LS	2	$31,250	$62,500	
2	Site Preparation	LS	2	$108,750	$217,500	Includes masonry wall and steel gate.
3	Yard Piping - above and below ground	LS	2	$147,500	$295,000	Connnection to existing suction and distribution system
4	1,500-gpm NWWRDS booster station	LS	1	$318,750	$318,750	
5	3,300-gpm Airport booster station	LS	1	$540,000	$540,000	
5	10,000-gallon Hydropneumatic Tank	LS	1	$137,500	$137,500	150 psi with appurtenances
6	5,000-gallon Hydropneumatic Tank	LS	1	$106,250	$106,250	300 psi with appurtenances
7	12-inch diameter DIP	LF	350	$212.50	$74,375	
8	Site Electrical and control	LS	2	$312,500	$625,000	NWWRDS Booster Site
9	Southeast Well Upgrades	LS	1	$475,352	$475,352	
	Subtotal				**$2,852,227**	
	Design/Engineering (15%)				$427,834	
	Inspection (2%)				$57,045	
	Contingency (25%)				$713,057	
TOTAL					**$4,050,163**	

Project Name:	Marana CIP		**Prepared by:**	EDC	**Date:**	4/8/22
Project No.	527.141		**Checked by:**		**Date:**	
Location:	Town of Marana, AZ		**Client:**	Town of Marana		
Description:	Partnered NWRRDS Project					

Item No	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	Design and Construction	LS	1	7,471,788	$7,471,788	Estimate Provided by Town of Marana
	TOTAL				**$7,471,788**	

Project Name: Marana CIP | **Prepared by:** EDC | **Date:** 4/8/22

Project No. 527.141 | **Checked by:** | **Date:**

Location: Town of Marana, AZ | **Client:** Town of Marana

Description: Marana Booster at NWRRDS

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	Design and Construction	LS	1	4,215,549	$4,215,549	Estimate Provided by Town of Marana
TOTAL					**$4,215,549**	

Project Name:	Marana CIP		**Prepared by:**	MDO	**Date:**	3/1/22
Project No.	527.141		**Checked by:**	EDC	**Date:**	3/1/22
Location:	Town of Marana, AZ		**Client:**	Town of Marana		
Description:	B-Zone Booster and Transmission Line					

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	Mobilization	LS	1	$31,250	$31,250	
2	Site Preparation	LS	1	$108,750	$108,750	
3	New Booster Station with pad and shade structure	LS	1	$418,750	$418,750	
4	Yard Piping - above and below ground	LS	1	$147,500	$147,500	
5	Site Electrical and Control	LS	1	$450,000	$450,000	Includes RTU
6	200 KVA Generator and automatic transfer switch	LS	1	$100,000	$100,000	
7	5,000-gallon Hydropneumatic Tank	LS	1	$81,250	$81,250	
8	16-inch water main	LF	8,920	$206	$1,837,520	
	Subtotal				**$3,175,020**	
	Design/Engineering (12%)				$381,002	
	Inspection (2%)				$63,500	
	Contingency (25%)				$793,755	
TOTAL					**$4,413,278**	

Project Name:	Marana CIP		**Prepared by:**	MDO	**Date:**	3/1/22
Project No.	527.141		**Checked by:**	EDC	**Date:**	3/1/22
Location:	Town of Marana, AZ		**Client:**	Town of Marana		
Description:	B-Zone reservoir					

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	Install 210,000 gallon Reservoir	LS	210,000	$1.88	$393,750	
2	120X120 Parcel Acquisition	LS	1	$18,750	$18,750	
3	Site Piping	LS	1	$22,500	$22,500	
	Subtotal				**$435,000**	
	Design/Engineering (15%)				$65,250	
	Inspection (2%)				$8,700	
	Contingency (25%)				$108,750	
TOTAL					**$617,700**	

Project Name:	Marana CIP			**Prepared by:**	MDO	**Date:**	3/1/22
Project No.	527.141			**Checked by:**	EDC	**Date:**	3/1/22
Location:	Town of Marana, AZ			**Client:**	Town of Marana		
Description:	C-Zone Booster						

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	Mobilization	LS	1	$31,250	$31,250	
2	Site Preparation	LS	1	$108,750	$108,750	
3	New 1200 gpm Booster Station with Shade Structure	LS	1	$362,500	$362,500	
4	Yard Piping - above and below ground	LS	1	$147,500	$147,500	
5	Site Electrical and Control	LS	1	$450,000	$450,000	includes RTU
6	200 KVA Generator and automatic transfer switch	LS	1	$100,000	$100,000	
7	5,000-gallon Hydropneumatic Tank	LS	1	$81,250	$81,250	
	Subtotal				**$1,281,250**	
	Design/Engineering (15%)				$192,188	
	Inspection (2%)				$25,625	
	Contingency (25%)				$320,313	
TOTAL					**$1,819,375**	

Project Name:	Marana CIP			**Prepared by:**	MDO	**Date:**	3/1/22
Project No.	527.141			**Checked by:**	EDC	**Date:**	3/1/22
Location:	Town of Marana, AZ			**Client:**	Town of Marana		
Description:	Tangerine 16-inch with Break Tanks						

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	16-inch water main	LF	16,750	$206	$3,450,500	
2	50,000 Gallon Break Tank	EA	2	$93,750	$187,500	
3	Parcel Acquisition	EA	2	$50,000	$100,000	
	Subtotal				**$3,738,000**	
	Design/Engineering (15%)				$560,700	
	Inspection (2%)				$74,760	
	Contingency (10%)				$934,500	
TOTAL					**$5,307,960**	

Project Name:	Marana CIP	**Prepared by:**	MDO	**Date:**	3/1/22	
Project No.	527.141	**Checked by:**	EDC	**Date:**	3/1/22	
Location:	Town of Marana, AZ	**Client:**	Town of Marana			
Description:	Tangerine 16-inch at I-10					

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	16-inch water main	LF	8,920	$206	$1,837,520	
2	Tie into existing water main	EA	2	$6,875	$13,750	
3	Pavement removal and replacement	LS	2	$1,875	$3,750	
	Subtotal				**$1,855,020**	
	Design/Engineering (15%)				$278,253	
	Inspection (2%)				$37,100	
	Contingency (25%)				$463,755	
TOTAL					**$2,634,128**	

Project Name:	Marana CIP		**Prepared by:**	MDO	**Date:**	3/1/22
Project No.	527.141		**Checked by:**	EDC	**Date:**	3/1/22
Location:	Town of Marana, AZ		**Client:**	Town of Marana		
Description:	Marana Park Well					

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
Marana Park Reservoir						
1	Well Drilling	LS	1	$488,100	$488,100	
2	Vertical Turbine Pump	LS	1	$81,250	$81,250	
3	8" DIP site piping and manifold	LS	1	$78,750	$78,750	
4	Electric and Controls	LS	1	$50,000	$50,000	Includes pump panel (no RTU)
	Subtotal				**$698,100**	
	Design/Engineering (15%)				$104,715	
	Inspection (2%)				$13,962	
	Contingency (25%)				$174,525	
TOTAL					**$991,302**	

Project Name:	Marana CIP		**Prepared by:**	MDO	**Date:**	3/1/22
Project No.	527.141		**Checked by:**	EDC	**Date:**	3/1/22
Location:	Town of Marana, AZ		**Client:**	Town of Marana		
Description:	Marana Park Reservoir					

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	Mobilization and Demobilization	LS	2	$43,750	$87,500	
2	Demolition	LS	1	$18,750	$18,750	
3	Tank and ring wall	Gall	1,500,000	$1.88	$2,820,000	
4	Site Piping	LS	1	$280,000	$280,000	
5	Site Grading and imported materials	LS	1	$130,258	$130,258	
6	Chlorinator	LS	1	$46,250	$46,250	
7	**Subtotal**				**$3,382,758**	
	Design/Engineering (8%)				$270,621	
	Inspection (2%)				$67,655	
	Contingency (25%)				$845,689	
	TOTAL				$4,566,723	

Project Name: Marana CIP | **Prepared by:** MDO | **Date:** 3/1/22
Project No. 527.141 | **Checked by:** EDC | **Date:** 3/1/22
Location: Town of Marana, AZ | **Client:** Town of Marana
Description: Sanders 24-inch Pipeline

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	24-inch water main	LF	8,700	$406	$3,532,200	Excludes hard rock excavation
2	Tie into existing water main	EA	2	$14,375	$28,750	
	Subtotal				**$3,560,950**	
	Design/Engineering (10%)				$356,095	
	Inspection (2%)				$71,219	
	Contingency (25%)				$890,238	
TOTAL					**$4,878,502**	

Project Name:	Marana CIP		**Prepared by:**	MDO	**Date:**	3/1/22
Project No.	527.141		**Checked by:**	EDC	**Date:**	3/1/22
Location:	Town of Marana, AZ		**Client:**	Town of Marana		
Description:	Twin Peaks Interconnect					

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	Construction	LS	1	2,901,250	$2,901,250	Estimate Provided by Town of Marana
TOTAL		**$2,901,250**				

Project Name:	Marana CIP	**Prepared by:**	MDO	**Date:**	3/1/22	
Project No.	527.141	**Checked by:**	EDC	**Date:**	3/1/22	
Location:	Town of Marana, AZ	**Client:**	Town of Marana			
Description:	Picture Rocks Interconnect					

Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
Picture Rocks Interconnect						
1	12-inch water main	LF	9,000	$135	$1,215,000	
2	Tie into existing water main	EA	1	$6,875	$6,875	
3	Pavement removal and replacement	LS	1	$1,875	$1,875	
	Subtotal				**$1,223,750**	
	Design/Engineering (15%)				$183,563	
	Inspection (2%)				$24,475	
	Contingency (25%)				$122,375	
	TOTAL				**$1,554,163**	

Project Name:	Marana CIP	**Prepared by:**	MDO	**Date:**	3/1/22
Project No.	527.141	**Checked by:**	EDC	**Date:**	3/1/22
Location:	Town of Marana, AZ	**Client:**	Town of Marana		
Description:	Honea East Well				

Item No.	Item Description	Unit	Quantity	Unit Price	Amount	Remarks
1	Re-equip well to add 250 gpm	LS	1	$75,000	$75,000	250 gpm pump inc starter cabinet
2	Pump and Motor	LS	1	$15,000	$15,000	Grundfos
3	Piping	LS	1	$62,500	$62,500	
Subtotal					**$152,500**	
Design/Engineering (15%)					$22,875	
Inspection (2%)					$3,050	
Contingency (25%)					$38,125	
TOTAL					**$216,550**	

Project Name:	Marana CIP			**Prepared by:**	MDO	**Date:** 3/1/22
Project No.	527.141			**Checked by:**	EDC	**Date:** 3/1/22
Location:	Town of Marana, AZ			**Client:**	Town of Marana	
Description:	Heritage Park Water Plant					

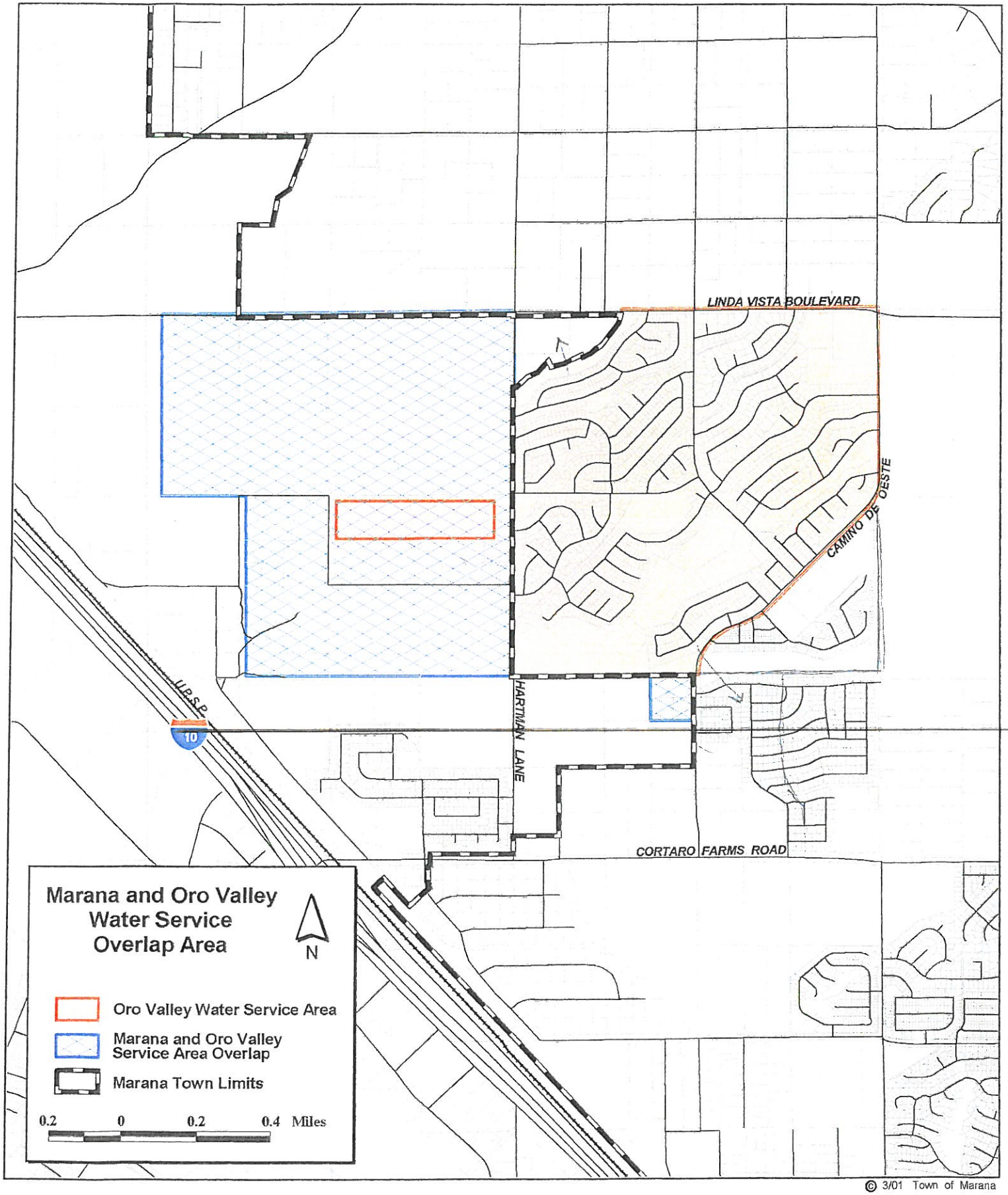
Item No.	Item Description	Units	Quantity	Unit Price	Amount	Remarks
1	Mobilization and Demobilization	LS	2	$43,750	$87,500	
2	Demolition	LS	1	$18,750	$18,750	
3	Tank and ring wall	Gall	1,800,000	$1.88	$3,384,000	
4	Site Piping	LS	1	$280,000	$280,000	
5	Site Grading and imported materials	LS	1	$130,258	$130,258	
6	Chlorinator	LS	1	$46,250	$46,250	
7	New 1250 gpm Booster Station with Shade Structure	LS	1	$362,500	$362,500	
8	Yard Piping - above and below ground	LS	1	$147,500	$147,500	
9	Site Electrical and Control	LS	1	$450,000	$450,000	includes RTU
10	200 KVA Generator and automatic transfer switch	LS	1	$100,000	$100,000	
11	5,000-gallon Hydropneumatic Tank	LS	1	$81,250	$81,250	
12	Well Drilling	LS	1	$488,108	$488,108	
13	1000 gpm Vertical Turbine Pump	LS	1	$81,250	$81,250	
14	8" DIP site piping and manifold	LS	1	$78,750	$78,750	
15	Electric and Controls	LS	1	$50,000	$50,000	Includes pump panel (no RTU)
16	**Subtotal**				**$3,946,758**	
	Design/Engineering (8%)				$315,741	
	Inspection (2%)				$78,935	
	Contingency (25%)				$986,689	
TOTAL					**$5,328,123**	

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APPENDIX B

Marana and Oro Valley Water Service Overlap Area

EXHIBIT A


LINDA VISTA BOULEVARD
CAMINO DE OESTE
HARTMAN LANE
CORTARO FARMS ROAD
U.P.R.R.
10
Marana and Oro Valley
Water Service
Overlap Area
N
Oro Valley Water Service Area
Marana and Oro Valley
Service Area Overlap
Marana Town Limits
0.2 0 0.2 0.4 Miles
© 3/01 Town of Marana



Sewer Infrastructure Improvement Plan (IIP) – March 2022 Revision

Town of Marana

Marana, AZ
March 15, 2022

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Appendices

Appendix A: Sewer Capacity Tables

Appendix B: Sewer Pipe Capacity Figures

Appendix C: CIP Cost Tables

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1 Introduction

As of July 2021, the Town of Marana Water Department (Marana Water) owns and operates a sewer collection system that currently serves approximately 5,200 sewer connections and conveys approximately 695,000 gallons per day (gpd) of sewage to the Marana Water Reclamation Facility (WRF). The Town of Marana (Town) is expected to grow rapidly in the upcoming years with an anticipated additional 10,362 new sewer connections in the next 10 years.

Arizona Revised Statutes (ARS) §9-463.05 require that Development Impact Fees be based on adopted land use assumptions and an adopted Infrastructure Improvements Plan (IIP). To support the Town in meeting these requirements, Marana Water contracted with HDR to update the Town's IIP which details the Town's existing sewer collection and treatment infrastructure, available capacity, units of demand, and planning for new infrastructure required to serve future proposed development.

The purpose of this IIP update is to summarize the capital improvements required for the Town to meet the demands associated with the next 10 years of growth and to provide the estimated costs of the improvements.

2 Existing Sewer Collection and Treatment Facilities

The Marana collection system has approximately 84.3 miles of gravity mains ranging in size from 8-inch to 24-inch diameter. In addition to gravity pipe, the collection system also has approximately 1,729 manholes and 1.7 miles of 8-inch diameter force main.

Marana Water operates multiple lift stations including the Rillito Vista Lift Station (LS) and the Saguaro Bloom LS. The Rillito Vista LS serves the Rillito Vista development and the Saguaro Bloom LS serves the active service area south of the Santa Cruz River. Marana Water also recently purchased the Adonis Sewer System and has constructed a new lift station and forcemain to provide service for this area. There are 153 active sewer connections in Adonis. The average daily flow is approximately 18,000 gallons per day (gpd).

Marana Water operates the Marana Water Reclamation Facility (WRF) which has a current treatment capacity of 1.5 million gallons per day (MGD) and treats the wastewater collected within the Marana sewer system service area. Through expansion the existing Marana WRF can provide a future treatment capacity of up to 4.5 MGD.

Marana Water also operates the Airport Sewer System which is a small standalone system consisting of approximately 5,000 linear feet (LF) of collection lines, 12 manholes and a septic tank / leach field disposal system rated for a treatment capacity of 19,000 gpd. There are currently no active connections to the Airport Sewer System.

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3 Designated Management Area and Active Sewer Service Area

Marana Water is the Designated Management Agency providing wastewater service for the Designated Management Area (DMA) which mainly consists of the western portion of the Town and areas beyond the Town limits to the west and south. The sewer DMA which is served by the existing Marana WRF includes only a portion of the Town's population. Many residential and commercial developments within the Town are located outside the DMA.

Within Marana Water's DMA, the current active sewer service area is generally located along the I-10 corridor north of the Santa Cruz River except for the Saguaro Bloom area which is located south of the Santa Cruz River.

The eastern portion of the Town is outside the Marana DMA and is served by Pima County Regional Wastewater Reclamation Department (PCRWRD) facilities.

The Town and Marana Water's DMA limits are shown in Figure 3-1. Figure 3-2 shows the current active sewer service area.

Figure 3-1. Town and Marana Water's DMA Limits

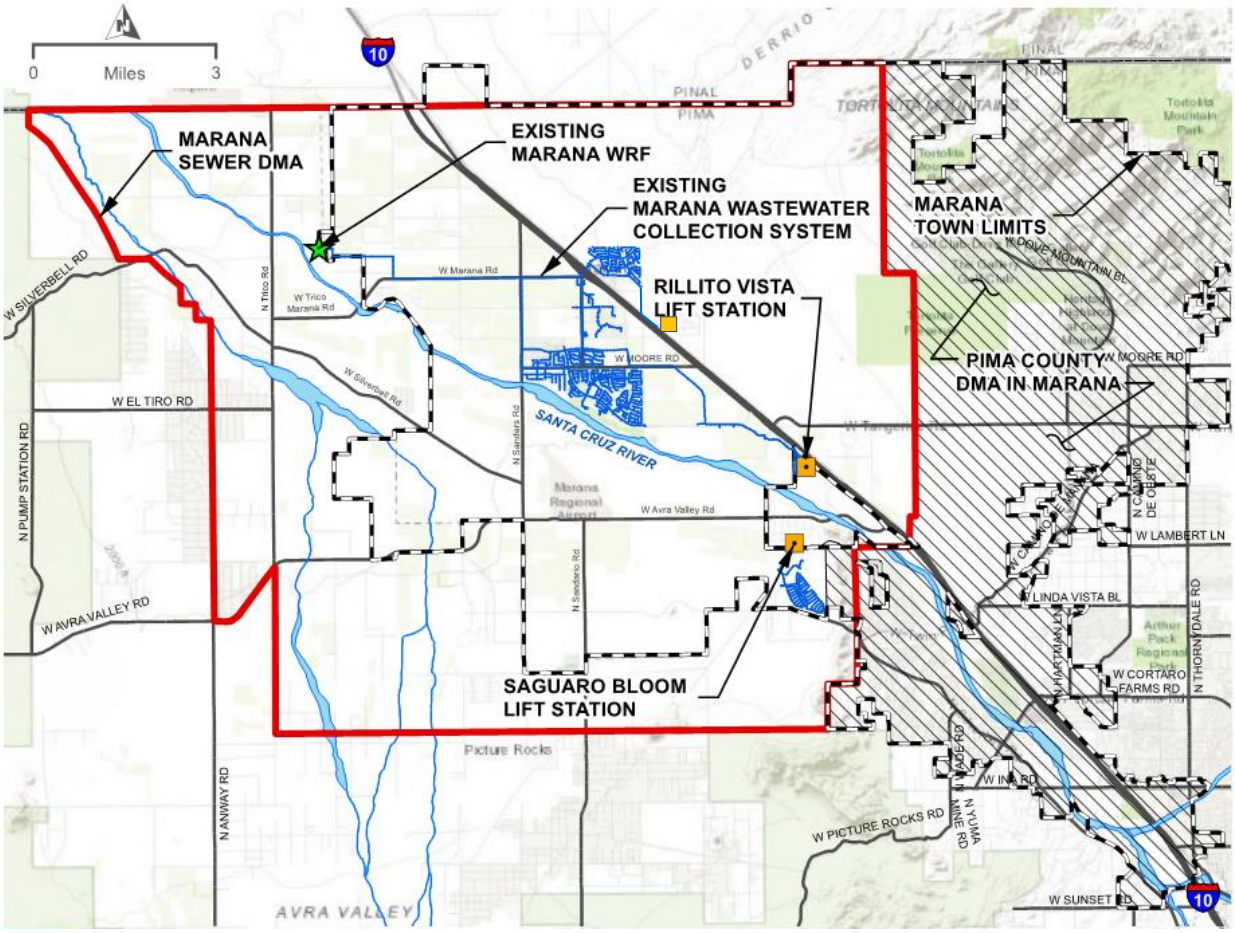
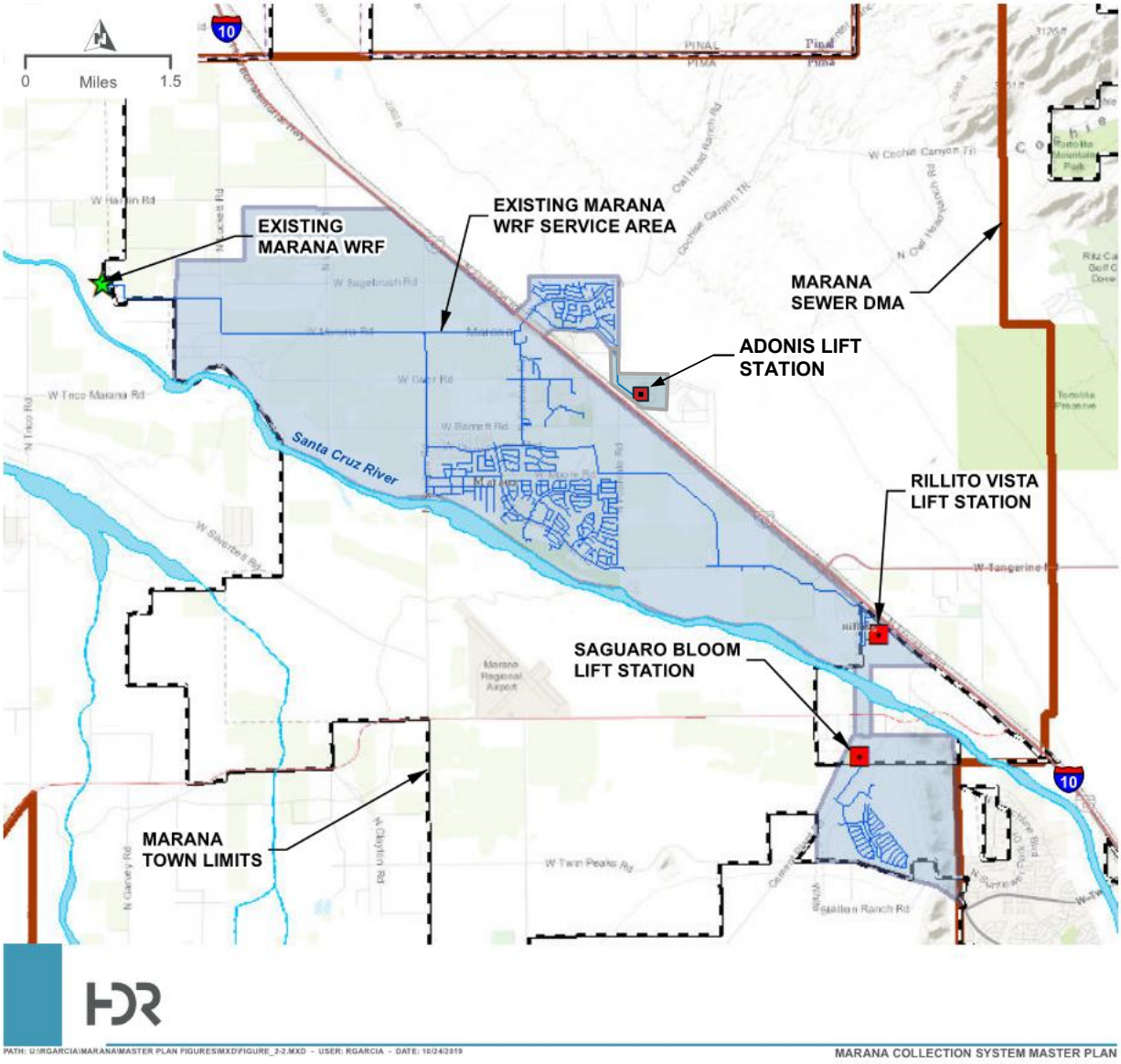


Figure 3-2. Active Sewer Service Area



4 Level of Service

The Town provides sewer collection and treatment for customers within the active sewer service area. The level of service can be defined by the design criteria established by the Town for these systems.

The sewer mains in the collection system are designed to convey the peak wet-weather flow (PWWF). Sewer mains are considered to have adequate capacity if they're able to convey the PWWF with the pipes flowing at depth to diameter (d/D) ratio of 75% or less and without any surcharging.

The Marana WRF is designed to treat the average dry-weather flow (ADWF) for the system and the facility is designed to produce Class A+ reclaimed water as defined by the Arizona Department of Environmental Quality (ADEQ). The treated effluent can be reused, recharged, or discharged to a tributary of the Santa Cruz River.

The level of service provided is the same for both existing and future customers within the active sewer service area.

5 Projected 10-Year Land Use

HDR completed the Sewer Conveyance Master Plan in June 2020 based on future development projections available at that time. Following the completion of the Sewer Conveyance Master Plan the Town has continued to update the projections for the future growth areas, so a revised summary of the commercial and residential developments within the DMA for the 10-year planning horizon associated with this IIP update was provided. The future growth areas for the Town are shown in Figure 5-1, and the estimated additional DUs to be added to the active sewer service area through Year 2032 are summarized in Table 5-1.

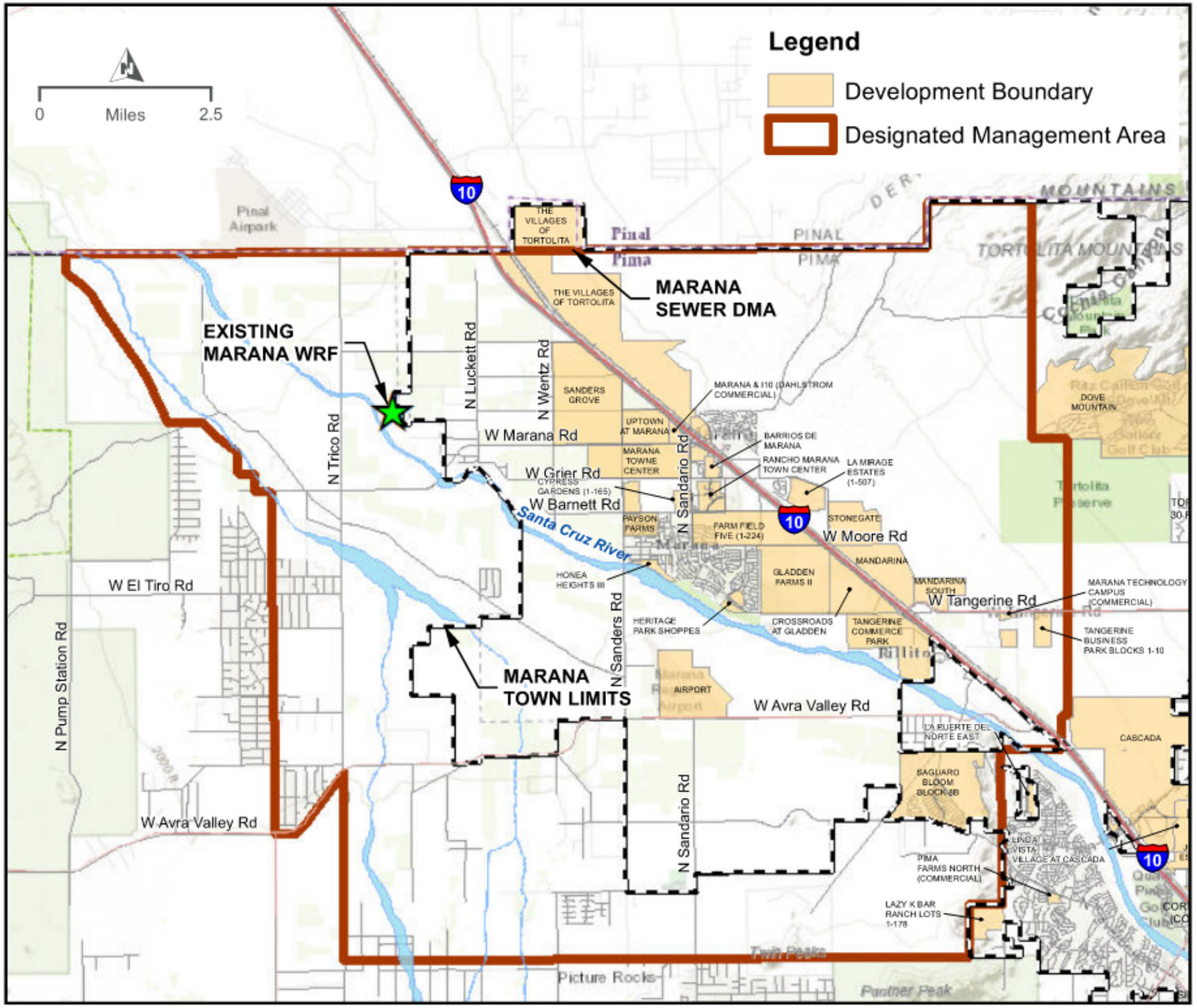
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Table 5-1. Future Developments and Estimated DU's

Development	Buildout DUs[a,b]	Existing DUs	Projected DUs from Jul 2021 – Nov 2022	Additional DUs to be Assigned	Year 2023 – 2027	Year 2028 – 2032	Year 2033+
Mandarina	2,544	-	-	2,544	532	810	1,202
Mandarina South	830	-	-	830	40	150	640
Stonegate	3,138	-	-	3,138	300	700	2,138
Villages of Tortolita	6,500	-	-	6,500	-	300	6,200
Subtotal East of I-10	**13,012**	**0**	**0**	**13,012**	**872**	**1,960**	**10,180**
Crossroads at Gladden	672	-	-	672	160	328	184
Cypress Gardens	217	-	-	217	100	117	-
Gladden Farms II	2,539	599	351	1,589	1,421	-	168
Gladden Farms Commercial	88	-	-	88	-	-	88
Heritage Park Shoppes	72	-	-	72	16	20	36
Marana & I-10	148	-	-	148	12	100	36
Marana Main Street	80	-	-	80	16	24	40
Marana Towne Center	4,048	-	-	4,048	40	80	3,928
Payson Farms	457	-	-	457	457	-	-
Rancho Marana – West	536	307	59	170	150	4	16
Rancho Marana Town Center	164	-	-	164	-	20	144
Saguaro Bloom	2,509	1,245	564	700	700	-	-
Sanders Grove	2,500	-	-	2,500	100	600	1,800
Tangerine Commerce Park	188	-	-	188	60	60	68
Uptown at Marana	930	-	-	930	-	300	630
Vanderbilt Farms	1,945	224	-	1,721	500	1,000	221
Villages of Barnett	251	-	81	170	50	-	120
Subtotal West of I-10	**17,344**	**2,375**	**1,055**	**13,914**	**3,782**	**2,653**	**7,479**
Airport	200	-	-	200	20	20	160
Subtotal Airport	**200**	**0**	**0**	**200**	**20**	**20**	**160**
Total	**30,556**	**2,375**	**1,055**	**27,126**	**4,674**	**4,633**	**17,819**

[a] Buildout is only within the service areas of the existing WRF and proposed WRF east of I-10
[b] Includes commercial developments with assumed density of 4 DUs per acre.

Figure 5-1. Development Activity



6 Existing System Capacity

This section provides an analysis of the existing system capacity as well as the current level of usage and commitments for usage of capacity for the existing wastewater collection and treatment systems.

6.1 Unit Wastewater Flow Rates

The initial step in evaluating the system capacity is establishing the estimated unit wastewater generation rate for the existing sewer collection and treatment system and an equivalency establishing the ratio of a service unit to the various types of land uses (i.e., residential, commercial and industrial, etc.) within the service area.

As part of the Sewer Conveyance Master Plan, HDR developed unit wastewater flow rates for each customer type based on a review of manhole flow monitoring data as well as applicable design and construction criteria contained in the Pima County Regional Wastewater Reclamation Department Engineering Design Standards and the Arizona Administrative Code (AAC).

The following provides a summary of the recommended parameters from the Sewer Conveyance Master Plan.

Gravity Conveyance System:

- Residential unit flow = 216 gpd/DU[1]
- Commercial unit flow rate = 1,466 gpd per connection
- PWWF = 499.5 gpd/DU[2]

Forcemains and Lift Stations:

- Lift stations should be capable of operating at minimum flows and maximum flows:
    - PWWF = 499.5 gpd/DU

Treatment Capacity:

- Average Dry Weather Flow (ADWF)** at 127.6 gal/DU. However, based on the last six months (September 2021 – February 2022) of influent data to the Marana

[1] From Pima County Engineering Design Standards, i.e., 2.7 residents per DU x 80 gallons per capita per day

[2] Per AAC R18-9-E301(D)(b)(i) for estimated population of 9,500 in sewer collection area, the Peak Dry Weather Peaking Factor is 1.85. This is multiplied against the PWWF peaking factor of 1.25, for a combined peaking factor of 2.31. Note that PWWF peaking factors are not specified in the AAC, Pima County Engineering Design Standards, or in ADEQ Bulletin 11. Recent developer estimates have used a PWWF peaking factor of 25% above PDWF. For the purposes of this IIP, 25% above PDWF was assumed.

WRF and most recent count of residential customer connections this, the ADWF for future forecasting has been revised to 139.6 gal/DU[3].

** Note that per ADEQ Bulletin 11 – Minimum Requirements for Design, Submission of Plans and Specifications for Sewage Works and AAC R18-9-B202(A)(9)(a), the design of treatment works should be based on the annual average rate which is based on actual flow rates.

6.2 Existing Treatment System – Required Capacity

A summary of the existing influents flows and available treatment capacity for the Marana WRF is provided in Table 6-1. Influent flows to the Marana WRF have steadily been increasing over the last year, increasing from approximately 550,000 gallons per day (gpd) to over 695,000 gpd as experienced in May 2021 which used as the baseline flow for this report noting that the Town's future development projections are based on a July 2021 starting point.

In anticipation of future growth, the existing Marana WRF recently underwent an expansion from 0.5 MGD to 1.5 MGD. With further expansion the build-out capacity of the Marana WRF is 4.5 MGD.

Based on the existing flows and available treatment capacity, the treatment system has approximately 805,000 gpd of excess capacity to support additional future growth.

Table 6-1. Marana WRF – Existing Wastewater Flows and Available Capacity

Location	Existing Wastewater Flow (gpd) as of July 2021
East of I-10	119,561[a]
West of I-10	575,439[b]
Total Existing Wastewater Flow (gpd)	**695,000[c]**
Marana WRF Treatment Capacity (gpd)	**1,500,000**
Excess Treatment Capacity Available (gpd)	**805,000**

[a] Estimated based on 784 DUs in San Lucas and 153 DUs in Adonis at ADWF of 127.6 gal/DU
[b] Estimated as difference between Marana WRF flows minus flows from east of I-10
[c] Based on average influent flows to the Marana WRF in May 2021, as reported by the Town

6.3 Existing Sewer Collection System - Required Capacity

The sewer collection system tributary to the Marana WRF is served by 12 main sewer interceptors that have been labeled A through L. Each interceptor is divided into segments that consist of one or more pipes. For the purposes of evaluating the existing sewer collection system capacity as required for the IIP, the interceptors were broken up into segments based on where wastewater loads are allocated to the system.

The sewer capacity tables are provided in Appendix A. Table A-1 shows the calculated PWWF, the resulting depth to diameter (d/D) ratio for the PWWF, the existing pipe

[3] ADWF estimated based on highest average monthly flow (792,000 gal/day in January 2022) and residential customer count of 5,672.

capacity, and the excess pipe capacity available for each interceptor segment. The existing capacity is based on the pipe flowing at 100% full. Excess capacity was determined as the difference between the existing PWWF and existing capacity of the pipe. As shown in the table, all pipes have sufficient capacity to convey the existing wastewater flows and have significant excess capacity available for future growth. However, there are multiple segments in Branches D, J, and K which are at or above 50% capacity and are expected to exceed a d/D ratio above 75% in the coming five years. For the purposes of this analysis, HDR identified pipes with d/D ratios of above 0.70 as potentially requiring capacity improvements. See Appendix B, Figure B-1 for the existing sewer capacity.

7 Projected Capacity Requirements

This section provides a summary of the number of projected service units and the projected wastewater loads necessitated by and attributable to new development in the active sewer service area for the period encompassing the next ten years (i.e., 2023 to 2032). The projected capacity requirements for the 10-year projected growth are also compared with the utilization and available capacity of the existing treatment and sewer collection system infrastructure.

7.1 Treatment Capacity Requirements

Table 7-1 provides a summary of the projected flows from future growth for the period between 2023 to 2027 (5 Year) and 2028 to 2032 (10 Year). The Airport Sewer System has a standalone treatment system and will not be conveyed to the Marana WRF. Table 7-2 provides a summary of the existing wastewater flows, additional flows associated with future growth and a comparison with available treatment capacity at the Marana WRF.

As shown in Table 7-2, the Marana WRF is projected to receive an additional ADWF of 796,977 gpd by the end of 2027 and 1,440,952 gpd by the end of 2032.

- The total expected ADWF at the Marana WRF in November 2027 will be 1.49 MGD as compared to the available capacity of 1.5 MGD, which represents approximately 99% of total capacity.
- The total expected ADWRF at the Marana WRF in November 2032 will be 2.14 MGD as compared to the available capacity of 1.5 MGD, which represents approximately 143% of capacity.

In anticipation of future growth, the existing Marana WRF recently underwent an expansion from 0.5 MGD to 1.5 MGD and with further expansion the build-out capacity of the Marana WRF is 4.5 MGD. The additional flows through Year 2027 take the Marana WRF approximately to its rated capacity, and additional flows through Year 2032 are beyond the Marana WRF current capacity. Design of the expansion of the Marana WRF should begin when ADWF exceeds 75% of capacity, which is expected to occur by early-2025. The expansion phasing for the existing WRF is shown in Figure 7-1, with flows

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after 2032 based on projections summarized in Table 6-1 and construction of a new WRF east of I-10 as identified in the 2020 Sewer Master Plan[4].

Table 7-1. Marana WRF – Future Estimated DU's and Influent Wastewater Flows

Development	Existing DUs	Projected DUs from Jul 2021 – Nov 2022	Total DUs to be Assigned 2023 – 2032	Year 2023 - 2027		Year 2028 - 2032	
				Additional DUs	Additional ADWF (gpd)[b]	Additional DUs	Additional ADWF (gpd)[b]
Mandarina	-	-	1,342	532	74,267	810	113,076
Mandarina South	-	-	190	40	5,584	150	20,940
Stonegate	-	-	1,000	300	41,880	700	97,720
Villages of Tortolita	-	-	300	-	-	300	41,880
Subtotal East of I-10	**0**	**0**	**2,832**	**872**	**121,731**	**1,960**	**273,616**
Crossroads at Gladden	-	-	488	160	22,336	328	45,789
Cypress Gardens	-	-	217	100	13,960	117	16,333
Gladden Farms II	599	351	1,421	1,421	198,372	-	-
Gladden Farms Commercial	-	-	-	-	-	-	-
Heritage Park Shoppes	-	-	36	16	2,234	20	2,792
Marana & I-10	-	-	112	12	1,675	100	13,960
Marana Main Street	-	-	40	16	2,234	24	3,350
Marana Towne Center	-	-	120	40	5,584	80	11,168
Payson Farms	-	-	457	457	63,797	-	-
Rancho Marana – West	307	59	154	150	20,940	4	558
Rancho Marana Town Center	-	-	20	-	-	20	2,792
Saguaro Bloom	1,245	564	700	700	97,720	-	-
Sanders Grove	-	-	700	100	13,960	600	83,760
Tangerine Commerce Park	-	-	120	60	8,376	60	8,376
Uptown at Marana	-	-	300	-	-	300	41,880
Vanderbilt Farms	224	-	1,500	500	69,800	1,000	139,600
Villages of Barnett	-	81	50	50	6,980	-	-
Subtotal West of I-10	**2,375**	**1,055**	**6,435**	**3,782**	**527,967**	**2,653**	**370,359**
Total	**2,375**	**1,055**	**9,267**	**4,654**	**649,698**	**4,613**	**643,975**
Airport Sewer System[a]	-	-	40	20	2,792	20	2,792
Subtotal Airport Sewer System	**0**	**0**	**40**	**20**	**2,792**	**20**	**2,792**

[a] The Airport Sewer System has a standalone treatment system and will not be conveyed to the Marana WRF.

[b] Future ADWF projections based on 139.6 gal/DU

[4] The 2020 Master Plan recommends flows from Villages of Tortolita, Adonis, and San Lucas be diverted to a new WRF located east of I-10 by 2035, and that by 2050 flows from all developments east of I-10 be diverted to the new WRF. High and low projections reflect a range of future residential housing density between 0.5 to 2 DUs per acre within 3,600 acres located west of I-10.

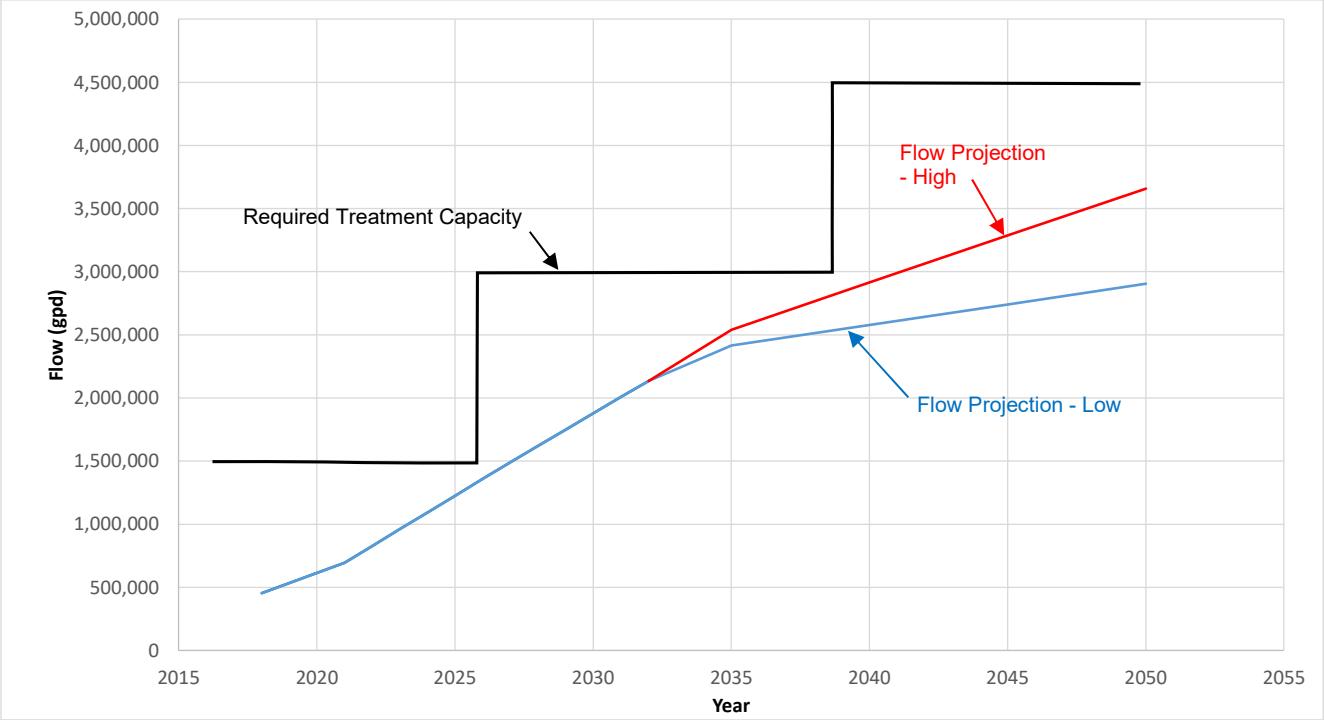
Table 7-2. Marana WRF – Treatment Capacity Summary

Period	Existing & Projected Wastewater Flow (gpd)	Additional ADWF (gpd)[b]		Total Wastewater Flow (gpd)	Available Treatment Capacity (gpd)	Excess Treatment Capacity Available (gpd)
		East of I-10	West of I-10			
Jul 2021 – Nov 2022	695,000	0	147,278[a]	842,278	1,500,000	657,722
2023-2027 (5 Year)	842,278	121,731	527,967	1,491,976	1,500,000	8,024
2028-2032 (10 Year)	1,491,976	273,616	370,359	2,135,951	1,500,000	(635,951)

[a] Includes Gladden Farms II – 351 DUs, Rancho Marana West – 59 DUs, Saguaro Bloom – 564 DUs, Villages of Barnett – 81 DUs for a total of 1,055 DUs as shown in Table 7-1. When multiplied by ADWF projection of 139.6 gal/DU, the total projected flow for these developments is 139,042 gpd.

[b] ADWF projections based on 139.6 gal/DU

Figure 7-1. Phased Expansion of the Existing WRF



7.2 Sewer Collection System Capacity Requirements

Pipe capacity tables for future scenarios are shown in Appendix A and shows the capacity of the existing sewer collection system to accommodate the growth from 2023 to 2027 if no improvements were made. Appendix A shows the projected flow (i.e., PWWF), the resulting d/D ratio for the PWWF, the existing pipe capacity, and the excess pipe capacity available for each interceptor segment for the 2023 to 2027 and 2028 to 2032 planning periods, respectively.

For the 2023 – 2027 planning period, Appendix A shows that the pipe capacity is 1.00 for portions of Branches I, J, and K, indicating surcharged conditions if no improvements

were made. There are a three pipe segments in Branch D that are above 0.70 but are not exacerbated by future growth. Based on these results, 2023 - 2027 improvements were identified (see Section 8.1) to alleviate the surcharging in the identified pipe segments. For the 2023 to 2027 planning period, the proposed gravity sewer improvements result in no pipes experiencing a d/D ratio above 0.70, other than the segments in Branch D which are slightly above 0.70.

For the 2028 to 2032 planning period, Appendix A shows the pipe capacity is 1.00 for portions of Branches B and G, indicating surcharged conditions. There are some pipe segments in Branch B with d/D values between 0.70 and 0.75 but are not exacerbated by future growth and were not susceptible to surcharging, so no future improvements were identified. Based on these results, improvements were identified (see Section 8.2) to alleviate the surcharging in the identified pipe segments. For the 2028 to 2032 planning period, the proposed gravity sewer improvements result in a reduction of d/D ratio from 1.00 to approximately 0.70 – 0.77, with no surcharging occurring anywhere in the system.

Figures showing the location of the pipes with insufficient capacity are included in Appendix B.

8 Capital Improvements

The Town of Marana is expected to develop rapidly over the next 10-15 years, requiring significant investment in infrastructure. HDR has identified several sewer infrastructure capital improvements that will provide Marana Water sufficient conveyance and treatment capacity to accommodate the Town's anticipated growth through the Year 2030 and beyond. The capital improvements required to support the Town's anticipated future growth are described in the following sections.

8.1 2023 – 2027 (5 Year) Infrastructure Improvements

Based on the results of model analysis completed for the Sewer Conveyance Master Plan it was determined the existing sewer collection system has available capacity to convey current peak wet weather flows while maintaining pipes at less than 75% capacity and without surcharging. However, new developments are anticipated east of I-10 in the 10 Year planning period and there is currently no infrastructure in place to support sewer service to these areas. The infrastructure improvements required for the 2023 to 2027 (5 Year) planning phase include gravity lines, lift stations, and force mains that are associated with new infrastructure needed to support sewer service to these new developments and infrastructure needed to increase the capacity of the existing gravity network west of I-10. The existing WRF has insufficient capacity to accommodate the projected growth for the (5 Year) planning phase and will require expansion.

Adonis

There are currently 153 DUs in Adonis, with sewer flows collected at two sewage lagoons located northwest of the development. Marana Water has constructed a new lift station and forcemain to direct flows from Adonis to the San Lucas gravity system. With the addition of the Adonis flows to the gravity system, there is sufficient capacity

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available in the gravity main that connects San Lucas to the collection system west of I-10 to accommodate an additional 600 DUs before it surcharges. Since the lift station and force main have already been constructed, the capital costs associated with Adonis are not included as part of the CIP.

Stonegate, Mandarina, and Mandarina South (Improvement 1) – Complete

The new lift station and forcemain serving Adonis was not sized to receive flows from Stonegate, Mandarina, and Mandarina South. Improvements will be required to support any future growth associated with Mandarina and other southeast developments.

A new 15-inch gravity line was constructed by Mandarina LLC to convey flows across I-10 and connect to the Town's existing gravity network west of I-10. The new 15-inch pipe was installed along West Moore Road and connects to the existing 18-inch north-south gravity sewer line at the intersection of West Moore Road and North Clark Farms Boulevard that connects to the existing gravity line from Saguaro Bloom. It is anticipated the new 15-inch gravity line was sized for ultimate buildout in conjunction with other improvements and will have capacity to serve up to 1,000 DUs associated with Mandarina and other southeast developments.

The existing gravity network west of I-10 has sufficient capacity to accommodate up to 250 DUs from these southeast developments, in addition to the anticipated growth on the west side of I-10, before additional gravity conveyance capacity to the existing WRF is required.

Reducing Flows Along Sandario Road (Improvements 2 and 3)

Improvements 2 and 3 are associated with increasing the capacity of the existing gravity network west of I-10. These improvements will also reduce flows flowing north on Sandario Road and provide flow relief to Branch F (see Figure A-2) which would exceed its maximum design capacity without these improvements.

Approximately 4,600 linear feet of 21-inch gravity lines will be required to augment the existing gravity network. A new 21-inch line will tie into the stubbed out gravity line at Tangerine Farms Road at Clark Farms Road and will continue north to Barnett Road (Improvement 2). The 21-inch line will continue west on Barnett Road to Sanders Road and tie into the existing sewer line on Sanders Road (Improvement 3).

Gravity System Improvements Along Sanders Road and Marana Road (Improvements 4 – 7)

The model results in Table A-1 show that without improvements, future sewer flows along Sanders Road and Marana Road will cause the existing sewer interceptors to surcharge. Approximately 19,300 linear feet of new gravity lines will be required to augment the existing gravity network.

The Town requested HDR evaluate two options for augmenting the sewer line along Sanders Road:

- Option 1: Install a parallel 21-inch sewer line from Barnett Road to Marana Road to augment the existing 15-inch sewer line.

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- Option 2: Replace the existing 15-inch sewer line from Barnett Road to Marana Road with a new 27-inch sewer line. This option would be beneficial to the Town in not having to maintain two parallel lines, and also because it would eliminate the need for the Town to rehabilitate the existing manholes on the 15-inch line which the Town projects will cost $731,282.

HDR evaluated the 21-inch and 27-inch options on Sanders Road, which are presented in Tables 8-1 and 8-2, respectively. As shown on Table 8-2, the 27-inch consolidated line will be lower in cost with the added benefit of fewer manholes and less pipe for the Town to maintain. HDR recommends this as the preferred option.

For augmenting the existing sewer capacity along Marana Road west of Sanders Road, the 2020 Sewer Conveyance Master Plan proposed a 27-inch new gravity line run north to Sagebrush Road, and then turn west, tying into the 24-inch existing gravity line at Luckett Road.

The new 27-inch gravity lines on Sanders Road and Sagebrush Road (Improvements 4, 5, 6 and 7) are expected to be required by 2024. As indicated by the results of the existing capacity evaluation (see Table A-1), Branches K and L will surcharge by the end of the 2023 – 2027 (5 Year) planning phase without improvements being made. The improvements are shown on Figure 8-1.

Marana WRF Expansion (Improvement 8)

If all projected development within the 10 year planning period occurs, the influent to the existing Marana WRF is anticipated to reach 99% of the current capacity of 1.5 MGD by November 2027. As such it's recommended the WRF expansion to 3.0 MGD be completed before then.

The Town's approach is to begin designing and constructing a new phase of expansion for its treatment facilities when the influent flow reaches 75% of the capacity of the facility. Per the current flow projections, by early 2025 the influent flow to the WRF will reach 1.125 MGD which is 75.0% of the WRF capacity, the regulatory point for beginning design.

Construction of the WRF expansion should begin prior to reaching 90% of capacity, which is expected to occur by late 2026. The influent flows are expected to reach 1.5 MGD by late 2027 and, assuming two years for construction, construction of the WRF expansion would need to start in late 2025. HDR estimates a 12 – 18 month design period prior to construction and recommends starting design in mid-2024.

A summary of the required sewer system improvements with estimated construction costs are provided in Table 8-1. The improvements are shown on Figure 8-1 and are designated with an Improvement ID number.

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Table 8-1. 2023 – 2027 (5 Year) Capital Improvement Summary, with Parallel 15-inch and 21-inch Lines on Sanders Rd (Improvement 5)

Improvement ID	Infrastructure Component		Construction Cost[a]
1	Gravity Pipe	15-inch x 3,334 LF	$0[b]
2	Gravity Pipe	21-inch x 800 LF	$325,297[c]
3	Gravity Pipe	21-inch x 3,600 LF	$2,463,177
4	Gravity Pipe	21-inch[e] x 5,300 LF	$3,613,417[d]
5	Gravity Pipe	27-inch x 2,800 LF	$1,696,982
6	Gravity Pipe	27-inch x 5,300 LF	$3,034,513
7	Gravity Pipe	27-inch x 5,900 LF	$3,371,261
8	Existing WRF Design and Construction	1.5 MGD	$39,161,113
TOTAL			**$53,665,760**

[a] These are total estimated project costs including direct construction costs, contingency, contractor fees, design fees, and other direct costs. Fully loaded costs for each improvement project are provided in Appendix C.

[b] See construction drawings for Town of Marana Public Sewer Improvement Plan Mandarina Offsite Sewer S-2020-007 / ENG2002-003. Project will be funded by developer, so costs are not included in the CIP.

[c] Construction cost of $309,807 provided by Meritage Homes, escalated by 5% per the Town's request.

[d] Cost of the 21-inch line does not include the $731,282 maintenance cost associated with rehabilitating the existing 15-inch line.

[e] Flows along Sanders Road will be conveyed by a new 21-inch pipeline and parallel existing 15-inch pipeline.

Table 8-2. 2023 – 2027 (5 Year) Capital Improvement Summary, with Consolidated 27-inch Line on Sanders Road (Improvement 5)

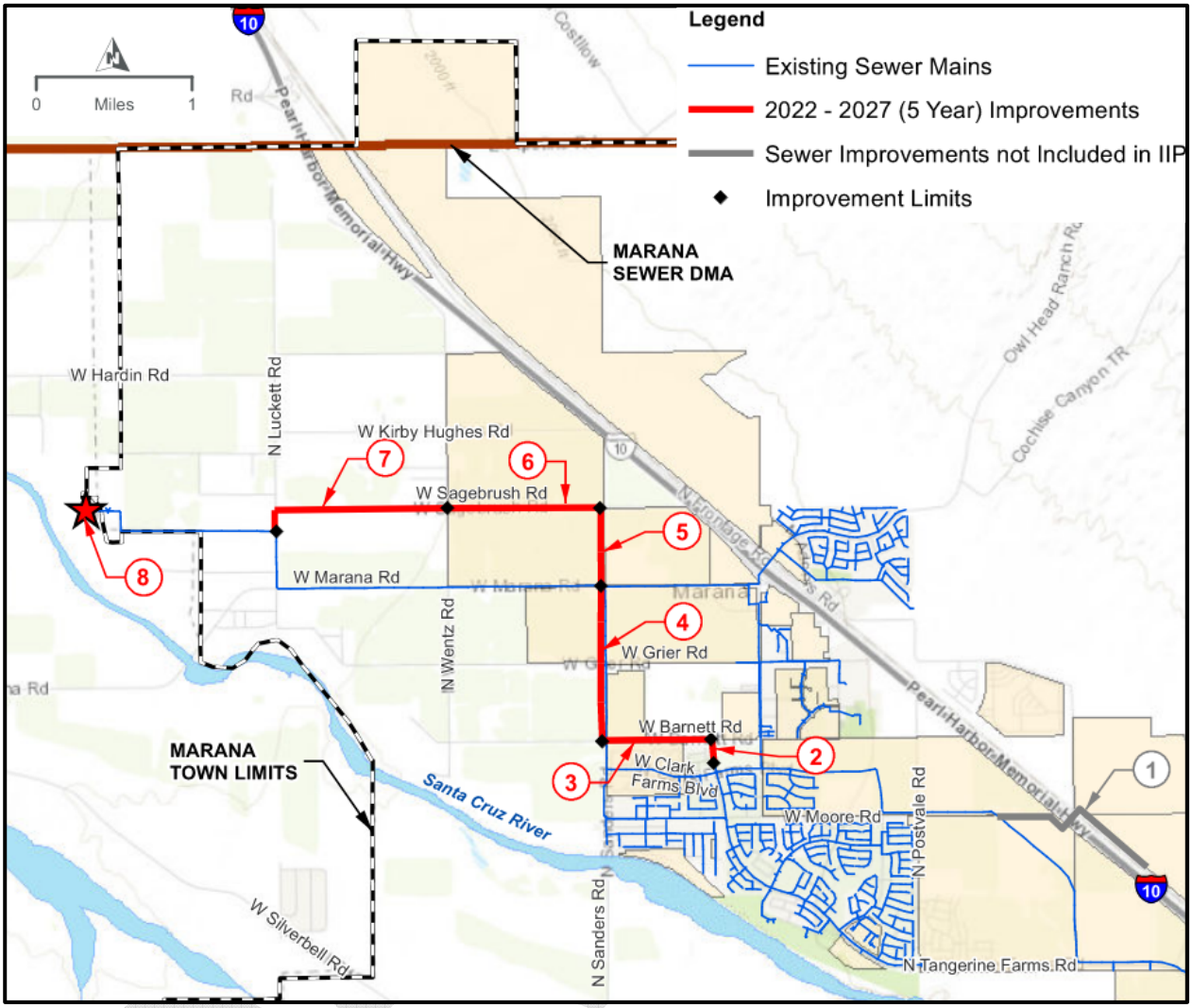
Improvement ID	Infrastructure Component		Construction Cost[a]
1	Gravity Pipe	15-inch x 3,334 LF	$0
2	Gravity Pipe	21-inch x 800 LF	$325,297[b]
3	Gravity Pipe	24-inch x 3,600 LF	$2,745,062
4	Gravity Pipe	27-inch x 5,300 LF	$3,066,315[c]
5	Gravity Pipe	27-inch x 2,800 LF	$1,696,982
6	Gravity Pipe	27-inch x 5,300 LF	$3,034,513
7	Gravity Pipe	27-inch x 5,900 LF	$3,371,261
8	Existing WRF Design and Construction	1.5 MGD	$39,161,113
TOTAL			**$53,075,246**

[a] These are total estimated project costs including direct construction costs, contingency, contractor fees, design fees, and other direct costs. Fully loaded costs for each improvement project are provided in Appendix C.

[b] Construction cost of $309,807 provided by Meritage Homes, escalated by 5% per the Town's request.

[c] The total cost of constructing Improvement 4 is $4,443,935. The proportional flow from the existing 15-inch line that would be replaced by Improvement 4 represents approximately 31% of the total flow capacity. Therefore, on a capacity basis $3,066,315 would be assigned to the 27-inch line and $1,377,620 to the existing 15-inch line.

Figure 8-1. 2023 – 2027 (5 Year) Capital Improvement Projects



8.2 2028 – 2032 (10 Year) Infrastructure Improvements

The infrastructure improvements required for the 2023 to 2027 (5 Year) planning phase include gravity lines, lift stations, and force mains that are associated with new infrastructure needed to support sewer service to these new developments and infrastructure needed to increase the capacity of the existing gravity network west of I-10.

Based on the results of model analysis, new developments located southeast of I-10 (Stonegate, Mandarina, Mandarina South) will result in flows that are in excess of the available capacity, specifically along the 15-inch and 18-inch sewer main that serve Saguaro Bloom. Furthermore, new developments located northeast of I-10 (Villages of Tortolita) will need to be conveyed to the existing sewer lines serving the Adonis and San Lucas development. The combined additional flows from developments located east of I-10 will require a new parallel pipe from the terminus of Improvement 7 to the existing WRF. The expanded WRF (Improvement 8) will have sufficient capacity to accommodate the projected growth for 10 Year planning phase.

New Parallel Gravity Main to Existing WRF (Improvement 9)

The existing 24-inch gravity main feeding the WRF will begin surcharging after developments both east and west of I-10 exceed 10,000 EDUs. This will require adding a new parallel 27-inch gravity line.

New Parallel Gravity Main Along Saguaro Bloom Transmission Line (Improvement 10)

Per the 2020 Master Plan, sewer flows from developments southeast of I-10 (Stonegate, Mandarina, Mandarina South) were to be conveyed to a new WRF located northeast of I-10 after exceeding 1,000 EDUs. The revised development projections show that the southeast developments will exceed 2,500 EDUs by 2032. The existing 15-inch gravity line (see Improvement 1) has sufficient capacity to convey new development flows through 2032, but these flows will result in surcharging along the 15-inch and 18-inch gravity lines downstream of the 15-inch connection point. This will require adding a new parallel 15-inch gravity line.

Villages of Tortolita (Improvement 11)

Initial growth is anticipated in the southern portion of the Villages of Tortolita. Sewer flows from the south will flow by gravity through an 18-inch line northwest towards a lift station and will be pumped back via a 6-inch force main to the existing gravity system serving San Lucas. The maximum size of the lift station is limited to serving approximately 600 EDUs from the Villages of Tortolita before surcharging the San Lucas and Adonis service line under I-10, or approximately 210 gpm pumping capacity. It should be noted the 18-inch gravity line is sized to accommodate ultimate buildout when flows from San Lucas, Adonis, and new developments to the southeast will be directed to the future WRF that will serve all developments on the east side of I-10.

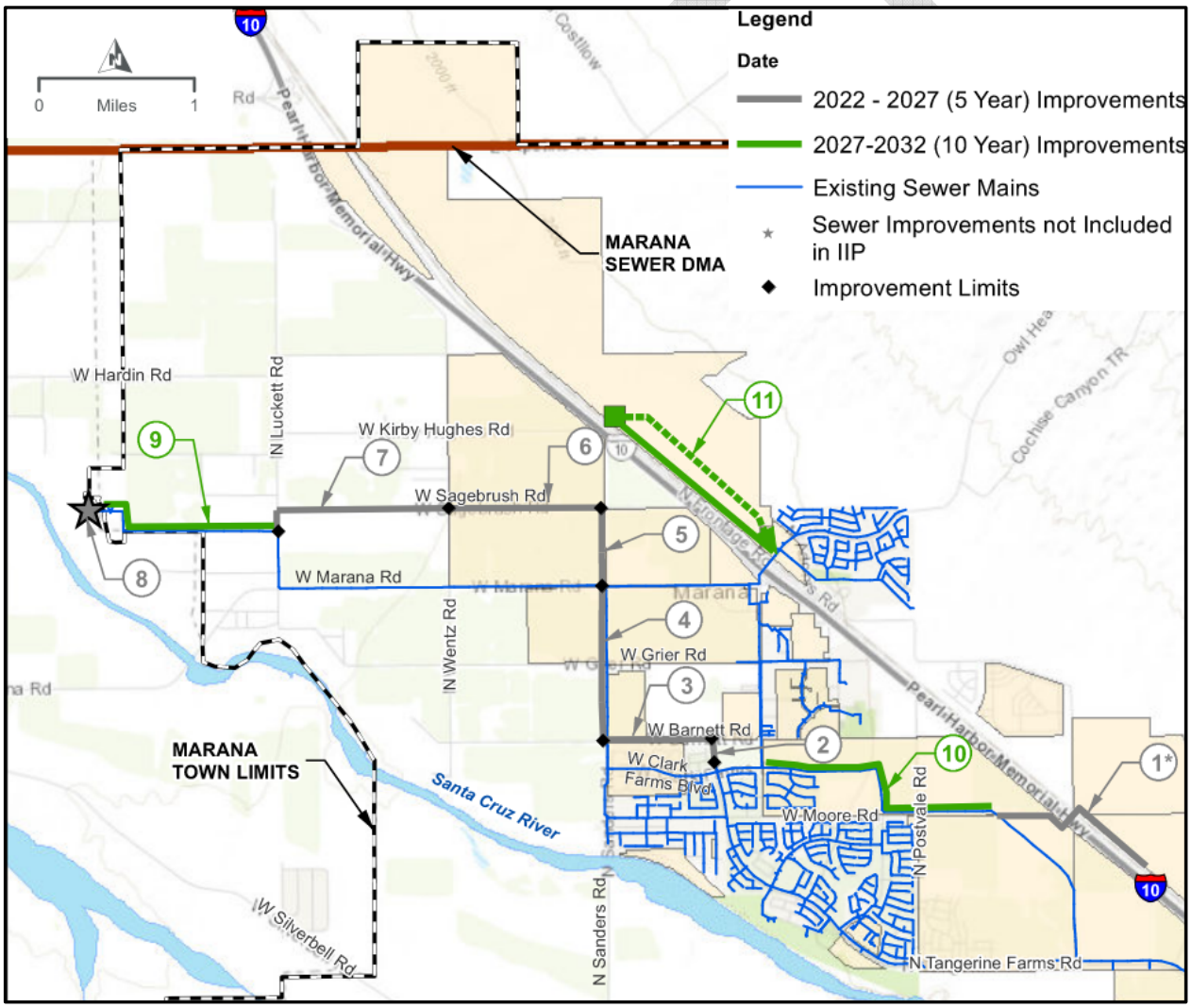
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Table 8-3. 2028 – 2032 (10 Year) Capital Improvement Summary

Improvement ID	Infrastructure Component	Size / Quality	Construction Cost[1]
9	Gravity Pipe	27-inch x 5,300 LF	$3,034,513
10	Gravity Pipe	15-inch x 11,500 LF	$5,809,844
11	Gravity Pipe Lift Station Force Main	18-inch x 6,800 LF 210 gpm capacity 6-inch x 6,800 LF	$4,500,690
TOTAL			**$13,345,048**

[1] These are total estimated project costs including direct construction costs, contingency, contractor fees, design fees, and other direct costs. Fully loaded costs for each improvement project are provided in Appendix C.

Figure 8-2. 2028 – 2032 (10 Year) Capital Improvement Projects



Appendix A: Pipe Capacity Tables

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Appendix A

Town of Marana
Sewer Infrastructure Improvement Plan (IIP)

Sewer Pipe Capacity Tables

					Existing System				2022 to 2027 (5 Year) without Improvements				2022 to 2027 (5 Year) with Improvements				2027 to 2032 (10 Year) without Improvements				2027 to 2032 (10 Year) with Improvements				
Interceptor Branch	Segment	Model ID	Diameter (in)	Length (ft)	Existing Flow (MGD)	d/D	Existing Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Improvement Notes
A	1	193	12	186	0.33	0.29	1.80	1.47	0.41	0.33	1.71	1.30	0.41	0.33	1.71	1.30	0.41	0.33	1.71	1.30	0.41	0.33	1.71	1.30	
A	2	194	12	296	0.33	0.30	1.63	1.30	0.41	0.34	1.63	1.22	0.41	0.34	1.63	1.22	0.60	0.42	1.63	1.02	0.60	0.42	1.63	1.02	
A	3	964	12	558	0.33	0.29	1.74	1.41	0.41	0.33	1.73	1.32	0.41	0.33	1.73	1.32	0.60	0.41	1.73	1.13	0.60	0.41	1.73	1.13	
A	4	85	12	285	0.33	0.32	1.52	1.19	0.41	0.35	1.52	1.11	0.41	0.35	1.52	1.11	0.60	0.44	1.52	0.92	0.60	0.44	1.52	0.92	
A	5	84	12	64	0.33	0.31	1.58	1.25	0.41	0.31	1.94	1.53	0.41	0.31	1.94	1.53	0.60	0.38	1.94	1.34	0.60	0.38	1.94	1.34	
A	6	83	12	282	0.33	0.31	1.58	1.25	0.41	0.35	1.56	1.16	0.41	0.35	1.56	1.16	0.60	0.43	1.56	0.96	0.60	0.43	1.56	0.96	
A	7	82	12	88	0.33	0.30	1.63	1.30	0.41	0.34	1.62	1.22	0.41	0.34	1.62	1.22	0.60	0.42	1.62	1.02	0.60	0.42	1.62	1.02	
A_NEW	1	5080	18	6,745																	0.20	0.16	3.61	3.41	New Pipe - 2027 to 2032 (10 Year)
B	1	69296	15	49	0.40	0.32	1.80	1.40	0.94	0.53	1.72	0.78	0.94	0.53	1.72	0.78	0.96	0.54	1.72	0.75	0.96	0.54	1.72	0.75	
B	2	90512	12	43	0.40	0.40	1.16	0.76	0.94	0.68	1.17	0.23	0.94	0.68	1.17	0.23	0.96	0.69	1.17	0.20	0.96	0.69	1.17	0.20	
B	3	90513	12	205	0.40	0.41	1.13	0.73	0.94	0.69	1.14	0.20	0.94	0.69	1.14	0.20	0.96	0.71	1.14	0.17	0.96	0.71	1.14	0.17	
B	4	90514	12	205	0.40	0.41	1.13	0.73	0.94	0.70	1.12	0.19	0.94	0.70	1.12	0.19	0.96	0.71	1.12	0.16	0.96	0.71	1.12	0.16	
B	5	90515	12	240	0.40	0.41	1.13	0.73	0.94	0.69	1.14	0.20	0.94	0.69	1.14	0.20	0.96	0.71	1.14	0.17	0.96	0.71	1.14	0.17	
B	6	90516	12	410	0.40	0.41	1.13	0.73	0.94	0.69	1.13	0.19	0.94	0.69	1.13	0.19	0.96	0.71	1.13	0.16	0.96	0.71	1.13	0.16	
B	7	90517	12	410	0.40	0.41	1.15	0.75	0.94	0.69	1.15	0.21	0.94	0.69	1.15	0.21	0.96	0.70	1.15	0.18	0.96	0.70	1.15	0.18	
B	8	90518	12	162	0.40	0.40	1.19	0.79	0.94	0.67	1.18	0.25	0.94	0.67	1.18	0.25	0.96	0.69	1.18	0.22	0.96	0.69	1.18	0.22	
B	9	90519	12	163	0.40	0.40	1.19	0.79	0.98	0.70	1.19	0.20	0.98	0.70	1.19	0.20	1.05	0.73	1.19	0.13	1.05	0.73	1.19	0.13	
B	10	90520	12	305	0.40	0.40	1.19	0.79	0.98	0.70	1.19	0.20	0.98	0.70	1.19	0.20	1.05	0.73	1.19	0.13	1.05	0.73	1.19	0.13	
B	11	90521	12	283	0.40	0.40	1.19	0.79	0.98	0.69	1.19	0.20	0.98	0.69	1.19	0.20	1.05	0.73	1.19	0.14	1.05	0.73	1.19	0.14	
B	12	90522	12	343	0.40	0.40	1.18	0.78	0.98	0.69	1.19	0.21	0.98	0.69	1.19	0.21	1.05	0.73	1.19	0.14	1.05	0.73	1.19	0.14	
B	13	90523	12	63	0.40	0.40	1.20	0.80	0.98	0.70	1.18	0.20	0.98	0.70	1.18	0.20	1.05	0.73	1.18	0.13	1.05	0.73	1.18	0.13	
B	14	90524	12	265	0.40	0.40	1.19	0.79	0.98	0.70	1.18	0.20	0.98	0.70	1.18	0.20	1.05	0.73	1.18	0.13	1.05	0.73	1.18	0.13	
B	15	90525	12	84	0.40	0.40	1.18	0.78	0.98	0.70	1.18	0.19	0.98	0.70	1.18	0.19	1.05	0.74	1.18	0.13	1.05	0.74	1.18	0.13	
B	16	90526	12	269	0.40	0.40	1.19	0.79	0.98	0.69	1.21	0.22	0.98	0.69	1.21	0.22	1.05	0.72	1.21	0.15	1.05	0.72	1.21	0.15	
B	17	90527	12	264	0.40	0.40	1.19	0.79	0.98	0.70	1.18	0.20	0.98	0.70	1.18	0.20	1.05	0.73	1.18	0.13	1.05	0.73	1.18	0.13	
B	18	90511	12	286	0.40	0.40	1.18	0.78	0.98	0.70	1.18	0.19	0.98	0.70	1.18	0.19	1.05	0.74	1.18	0.13	1.05	0.74	1.18	0.13	
B	19	69295	15	487	0.40	0.29	2.16	1.76	0.98	0.47	2.16	1.17	0.98	0.47	2.16	1.17	1.05	0.49	2.16	1.10	1.05	0.49	2.16	1.10	
B	20	69294	15	361	0.40	0.26	2.74	2.35	0.98	0.41	2.73	1.75	0.98	0.41	2.73	1.75	1.05	0.43	2.73	1.68	1.05	0.43	2.73	1.68	
B	21	69293	15	173	0.40	0.26	2.61	2.21	0.98	0.43	2.61	1.63	0.98	0.43	2.61	1.63	1.05	0.44	2.61	1.56	1.05	0.44	2.61	1.56	
B	22	69292	15	172	0.40	0.24	3.13	2.73	0.98	0.38	3.14	2.16	0.98	0.38	3.14	2.16	1.05	0.40	3.14	2.09	1.05	0.40	3.14	2.09	
B	23	69291	15	400	0.40	0.30	2.01	1.61	1.18	0.55	2.00	0.83	1.18	0.55	2.00	0.83	1.59	0.67	2.00	0.41	1.59	0.67	2.00	0.41	
B	24	69290	15	390	0.40	0.26	2.72	2.32	1.18	0.46	2.73	1.55	1.18	0.46	2.73	1.55	1.59	0.55	2.73	1.14	1.59	0.55	2.73	1.14	
B	25	69289	15	251	0.41	0.27	2.55	2.14	1.18	0.48	2.55	1.37	1.18	0.48	2.55	1.37	1.59	0.57	2.55	0.96	1.59	0.57	2.55	0.96	
B	26	69288	15	500	0.41	0.28	2.37	1.96	1.18	0.50	2.36	1.18	1.18	0.50	2.36	1.18	1.59	0.60	2.36	0.77	1.59	0.60	2.36	0.77	
B	27	69287	15	500	0.41	0.28	2.37	1.96	1.18	0.50	2.38	1.20	1.18	0.50	2.38	1.20	1.59	0.60	2.38	0.78	1.59	0.60	2.38	0.78	
B	28	69286	15	386	0.41	0.28	2.44	2.03	1.18	0.49	2.42	1.24	1.18	0.49	2.42	1.24	1.59	0.59	2.42	0.83	1.59	0.59	2.42	0.83	
B	29	69285	15	391	0.41	0.28	2.33	1.92	1.18	0.50	2.33	1.15	1.18	0.50	2.33	1.15	1.59	0.61	2.33	0.74	1.59	0.61	2.33	0.74	
B	30	69284	15	385	0.41	0.27	2.54	2.14	1.18	0.48	2.54	1.36	1.18	0.48	2.54	1.36	1.59	0.57	2.54	0.94	1.59	0.57	2.54	0.94	
B	31	69283	15	95	0.41	0.21	4.16	3.75	1.18	0.37	4.10	2.91	1.18	0.37	4.10	2.91	1.59	0.43	4.10	2.50	1.59	0.43	4.10	2.50	
B	32	69282	15	336	0.41	0.27	2.47	2.07	1.18	0.48	2.49	1.31	1.18	0.48	2.49	1.31	1.59	0.58	2.49	0.90	1.59	0.58	2.49	0.90	
B	33	69281	15	315	0.41	0.28	2.37	1.97	1.18	0.50	2.34	1.16	1.18	0.50	2.34	1.16	1.59	0.61	2.34	0.74	1.59	0.61	2.34	0.74	
B	34	69280	15	496	0.41	0.28	2.37	1.96	1.18	0.50	2.37	1.19	1.18	0.50	2.37	1.19	1.59	0.60	2.37	0.78	1.59	0.60	2.37	0.78	
B	35	69279	15	258	0.41	0.31	1.92	1.51	1.18	0.57	1.92	0.74	1.18	0.57	1.92	0.74	1.59	0.69	1.92	0.33	1.59	0.69	1.92	0.33	
B	36	69278	15	476	0.41	0.31	2.00	1.60	1.18	0.55	2.01	0.83	1.18	0.55	2.01	0.83	1.59	0.67	2.01	0.41	1.59	0.67	2.01	0.41	
B	37	69277	15	475	0.41	0.28	2.37	1.96	1.18	0.50	2.36	1.18	1.18	0.50	2.36	1.18	1.59	0.60	2.36	0.76	1.59	0.60	2.36	0.76	
B	38	69276	15	213	0.41	0.25	2.90	2.49	1.18	0.44	2.94	1.75	1.18	0.44	2.94	1.75	1.59	0.53	2.94	1.34	1.59	0.53	2.94	1.34	
B	39	69275	18	304	0.41	0.26	2.73	2.33	1.18	0.46	2.71	1.53	1.18	0.46	2.71	1.53	1.59	0.55	2.71	1.12	1.59	0.55	2.71	1.12	
B	40	69274	18	398	0.41	0.25	2.98	2.57	1.18	0.44	2.99	1.81	1.18	0.44	2.99	1.81	1.59	0.52	2.99	1.39	1.59	0.52	2.99	1.39	
B	41	69273	18	600	0.41	0.26	2.72	2.32	1.18	0.46	2.72	1.54	1.18	0.46	2.72	1.54	1.59	0.55	2.72	1.13	1.59	0.55	2.72	1.13	
B	42	69272	18	597	0.41	0.25	3.04	2.63	1.18	0.43	3.03	1.85	1.18	0.43	3.03	1.85	1.59	0.51	3.03	1.44	1.59	0.51	3.03	1.44	
B	43	69271	18	446	0.41	0.26	2.72	2.31	1.18	0.46	2.71	1.53	1.18	0.46	2.71	1.53	1.59	0.55	2.71	1.12	1.59	0.55	2.71	1.12	
B	44	69270	18	600	0.41	0.25	2.97	2.56	1.18	0.44	2.96	1.78	1.18	0.44	2.96	1.78	1.59	0.52	2.96	1.36	1.59	0.52	2.96	1.36	
B	45	69269	18	409	0.41	0.25	3.05	2.64	1.18	0.43	3.06	1.88	1.18	0.43	3.06	1.88	1.59	0.51	3.06	1.47	1.59	0.51	3.06	1.47	
B	46	69268	18	375	0.41	0.24	3.26	2.86	1.63	0.50	3.28	1.65	1.63	0.50	3.28	1.65	2.79	0.71	3.28	0.50	1.51	0.48	3.28	1.77	
B	47	69267	18	291	0.41	0.23	3.48	3.07	1.63	0.48	3.47	1.84	1.63	0.48	3.47	1.84	2.79	0.68	3.47	0.69	1.57	0.47	3.47	1.90	
B	48	69266	18	598	0.41	0.25	2.97	2.57	1.63	0.53	2.96	1.33	1.63	0.53	2.96	1.33	2.79	0.77	2.96	0.17	1.57	0.52	2.96	1.38	
B	49	69265	18	601	0.41	0.25	2.89	2.48	1.63	0.54	2.90	1.27	1.63	0.54	2.90	1.27	2.79	0.79	2.90	0.12	1.57	0.52	2.90	1.33	
B	50	69264	18	498	0.41	0.26	2.81	2.41	2.06	0.64	2.80	0.74	2.06	0.64	2.80	0.74	3.18	1.00	2.80	-0.38	1.99	0.62	2.80	0.82	
B	51	69262	18	500	0.41	0.25	3.04	2.64	2.29	0.65	3.04	0.75	2.29	0.65	3.04	0.75	3.84	1.00	3.04	-0.80	2.66	0.72	3.04	0.38	
B	52	69261	18	560	0.41	0.25	3.02	2.61	2.29	0.65	3.02	0.73	2.29	0.65	3.02	0.73	3.84	1.00	3.02	-0.82	2.66	0.73	3.02	0.36	
B	53	75260	18	600	0.41	0.24	3.12	2.71	2.29	0.64	3.11	0.82	2.29	0.64	3.11	0.82	3.84	1.00	3.11	-0.73	2.66	0.71	3.11	0.45	
B	54	75271	18	92	0.41	0.25	2.93	2.52	2.29	0.66	2.95	0.66	2.29	0.66	2.95	0.66	3.84	1.00	2.95	-0.89	2.66	0.74	2.95	0.29	
B	55	75270	18	279	0.41	0.25	2.91	2.51	2.29	0.67	2.91	0.61	2.29	0.67	2.91	0.61	3.84	1.00	2.91	-0.94	2.66	0.75	2.91	0.24	
B	56	75269	18	238	0.41	0.25	2.93	2.52	2.29	0.67	2.92	0.63	2.29	0.67	2.92	0.63	3.84	1.00	2.92	-0.92	2.66	0.75	2.92	0.26	
B	57	75268	18	273	0.41	0.25	2.91	2.51	2.29	0.67	2.92	0.63	2.29	0.67	2.92	0.63	3.84	1.00	2.92	-0.92	2.66	0.75	2.92	0.26	
B	58	75267	18	599	0.41	0.25	2.92	2.51	2.29	0.67	2.92	0.62	2.29	0.67	2.92	0.62	3.84	1.00	2.92	-0.92	2.66	0.75	2.92	0.26	
B	59	75266	18	66	0.41	0.25	2.90	2.50	2.29	0.68	2.87	0.58	2.29	0.68	2.87	0.58	3.84	1.00	2.87	-0.97	2.66	0.76	2.87	0.21	
B	60	75265	18	167	0.41	0.25	2.93	2.52	2.29	0.66	2.99	0.69	2.29	0.66	2.99	0.69	3.84	1.00	2.99	-0.86	2.66	0.74	2.99	0.32	
B	61	75264	18	346	0.41	0.25	2.93	2.52	2.29	0.67	2.92	0.62	2.29	0.67	2.92	0.62	3.84	1.00	2.92	-0.93	2.66	0.75	2.92	0.25	
B	62	75263	18	600	0.41	0.25	2.92	2.51	2.29	0.67	2.92	0.62	2.29	0.67	2.92	0.62	3.84	1.00	2.92	-0.93	2.66	0.75	2.92	0.26	
B	63	75262	18	600	0.41	0.25	2.92	2.51	2.29	0.67	2.91	0.62	2.29	0.67	2.91	0.62	3.84	1.00	2.91	-0.93	2.66	0.75	2.91	0.25	
B	64	75261	18	599	0.41	0.25	2.92	2.51	2.29	0.67	2.92	0.62	2.29	0.67	2.92	0.62	3.84	1.00	2.92	-0.92	2.66	0.75	2.92	0.26	
B	65	331	18	600	0.41	0.25	2.92	2.51	2.29	0.68	2.86	0.56	2.29	0.68	2.86	0.56	3.84	1.00	2.86	-0.99	2.66	0.76	2.86	0.19	
B	66	333	18	600	0.46	0.27	2.92	2.46	2.33	0.68	2.91	0.58	2.33	0.68	2.91	0.58	3.88	1.00	2.91	-0.96	2.70	0.76	2.91	0.22	
B	67	332	18	298	0.46	0.27	2.93	2.47	2.33	0.68	2.88	0.55	2.33	0.68	2.88	0.55	3.88	1.00	2.88	-1.00	2.70	0.77	2.88	0.18	

Appendix A

Town of Marana
Sewer Infrastructure Improvement Plan (IIP)

Sewer Pipe Capacity Tables

					Existing System				2022 to 2027 (5 Year) without Improvements				2022 to 2027 (5 Year) with Improvements				2027 to 2032 (10 Year) without Improvements				2027 to 2032 (10 Year) with Improvements				
Interceptor Branch	Segment	Model ID	Diameter (in)	Length (ft)	Existing Flow (MGD)	d/D	Existing Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Improvement Notes
B_NEW	1	5106	15	350																	1.28	0.57	2.05	0.77	New Pipe - 2027 to 2032 (10 Year)
B_NEW	2	5108	15	3,682																	1.34	0.63	1.84	0.50	New Pipe - 2027 to 2032 (10 Year)
B_NEW	3	5110	15	780																	1.34	0.63	1.84	0.49	New Pipe - 2027 to 2032 (10 Year)
B_NEW	4	5112	15	733																	1.34	0.69	1.62	0.28	New Pipe - 2027 to 2032 (10 Year)
B_NEW	5	5114	15	625																	1.34	0.71	1.59	0.25	New Pipe - 2027 to 2032 (10 Year)
B_NEW	6	5116	15	1,807																	1.34	0.65	1.76	0.42	New Pipe - 2027 to 2032 (10 Year)
B_NEW	7	5118	15	1,181																	1.34	0.66	1.72	0.38	New Pipe - 2027 to 2032 (10 Year)
C	1	987	12	459	0.00	0.00	1.08	1.08	0.51	0.49	1.08	0.57	0.51	0.49	1.08	0.57	0.51	0.49	1.08	0.57	0.51	0.49	1.08	0.57	
C	2	600	12	428	0.00	0.00	1.00	1.00	0.51	0.50	1.01	0.49	0.51	0.50	1.01	0.49	0.51	0.50	1.01	0.49	0.51	0.50	1.01	0.49	
C	3	608	12	251	0.00	0.00	1.10	1.10	0.51	0.48	1.10	0.59	0.51	0.48	1.10	0.59	0.51	0.48	1.10	0.59	0.51	0.48	1.10	0.59	
C	4	607	12	364	0.00	0.00	1.01	1.01	0.51	0.50	1.01	0.50	0.51	0.50	1.01	0.50	0.51	0.50	1.01	0.50	0.51	0.50	1.01	0.50	
C	5	606	12	396	0.06	0.17	1.00	0.94	0.55	0.53	1.00	0.45	0.55	0.53	1.00	0.45	0.55	0.53	1.00	0.45	0.55	0.53	1.00	0.45	
C	6	605	12	217	0.06	0.17	1.02	0.95	0.55	0.53	1.02	0.46	0.55	0.53	1.02	0.46	0.55	0.53	1.02	0.46	0.55	0.53	1.02	0.46	
C	7	604	12	301	0.06	0.17	1.00	0.94	0.55	0.53	1.01	0.45	0.55	0.53	1.01	0.45	0.55	0.53	1.01	0.45	0.55	0.53	1.01	0.45	
C	8	603	12	246	0.06	0.17	1.01	0.95	0.55	0.53	1.00	0.45	0.55	0.53	1.00	0.45	0.55	0.53	1.00	0.45	0.55	0.53	1.00	0.45	
C	9	602	12	335	0.06	0.17	1.00	0.94	0.55	0.53	1.00	0.45	0.55	0.53	1.00	0.45	0.55	0.53	1.00	0.45	0.55	0.53	1.00	0.45	
C	10	601	12	146	0.06	0.17	1.01	0.95	0.55	0.53	1.02	0.46	0.55	0.53	1.02	0.46	0.55	0.53	1.02	0.46	0.55	0.53	1.02	0.46	
C	11	901	15	23	0.19	0.17	2.92	2.73	0.67	0.33	2.87	2.20	0.67	0.33	2.87	2.20	0.67	0.33	2.87	2.20	0.67	0.33	2.87	2.20	
C	12	887	15	489	0.19	0.23	1.60	1.41	0.67	0.44	1.64	0.97	0.67	0.44	1.64	0.97	0.67	0.44	1.64	0.97	0.67	0.44	1.64	0.97	
C	13	895	15	259	0.19	0.24	1.56	1.37	0.67	0.47	1.50	0.83	0.67	0.47	1.50	0.83	0.67	0.47	1.50	0.83	0.67	0.47	1.50	0.83	
C	14	894	15	48	0.19	0.23	1.60	1.41	0.67	0.46	1.57	0.90	0.67	0.46	1.57	0.90	0.67	0.46	1.57	0.90	0.67	0.46	1.57	0.90	
C	15	618	15	214	0.20	0.24	1.54	1.34	0.68	0.47	1.53	0.85	0.68	0.47	1.53	0.85	0.68	0.47	1.53	0.85	0.68	0.47	1.53	0.85	
C	16	893	15	263	0.20	0.23	1.67	1.47	0.68	0.44	1.68	1.00	0.68	0.44	1.68	1.00	0.68	0.44	1.68	1.00	0.68	0.44	1.68	1.00	
C	17	892	15	263	0.20	0.24	1.59	1.39	0.68	0.46	1.59	0.91	0.68	0.46	1.59	0.91	0.68	0.46	1.59	0.91	0.68	0.46	1.59	0.91	
C	18	891	15	262	0.24	0.26	1.57	1.33	0.72	0.48	1.57	0.85	0.72	0.48	1.57	0.85	0.72	0.48	1.57	0.85	0.72	0.48	1.57	0.85	
C	19	890	15	359	0.24	0.25	1.74	1.50	0.72	0.45	1.74	1.02	0.72	0.45	1.74	1.02	0.72	0.45	1.74	1.02	0.72	0.45	1.74	1.02	
C	20	889	15	268	0.26	0.27	1.58	1.32	0.74	0.48	1.57	0.83	0.74	0.48	1.57	0.83	0.74	0.48	1.57	0.83	0.74	0.48	1.57	0.83	
C	21	877	15	363	0.26	0.27	1.64	1.39	0.74	0.47	1.65	0.91	0.74	0.47	1.65	0.91	0.74	0.47	1.65	0.91	0.74	0.47	1.65	0.91	
C	22	696	15	191	0.58	0.42	1.60	1.02	1.08	0.60	1.60	0.52	1.08	0.60	1.60	0.52	1.08	0.60	1.60	0.52	1.08	0.60	1.60	0.52	
C	23	983	15	500	0.58	0.45	1.40	0.82	1.08	0.66	1.40	0.32	1.08	0.66	1.40	0.32	1.08	0.66	1.40	0.32	1.08	0.66	1.40	0.32	
C	24	587	15	397	0.58	0.43	1.53	0.95	1.08	0.62	1.53	0.45	1.08	0.62	1.53	0.45	1.08	0.62	1.53	0.45	1.08	0.62	1.53	0.45	
C	25	586	15	251	0.59	0.41	1.63	1.04	1.08	0.60	1.63	0.55	1.08	0.60	1.63	0.55	1.08	0.60	1.63	0.55	1.08	0.60	1.63	0.55	
C	26	585	15	270	0.59	0.46	1.37	0.79	1.08	0.67	1.38	0.29	1.08	0.67	1.38	0.29	1.08	0.67	1.38	0.29	1.08	0.67	1.38	0.29	
C	27	584	15	271	0.59	0.46	1.35	0.76	1.08	0.68	1.34	0.26	1.08	0.68	1.34	0.26	1.08	0.68	1.34	0.26	1.08	0.68	1.34	0.26	
C	28	546	15	27	0.59	0.42	1.62	1.03	1.08	0.60	1.62	0.54	1.08	0.60	1.62	0.54	1.08	0.60	1.62	0.54	1.08	0.60	1.62	0.54	
C	29	583	15	224	0.60	0.42	1.63	1.03	1.10	0.60	1.64	0.54	1.10	0.60	1.64	0.54	1.10	0.60	1.64	0.54	1.10	0.60	1.64	0.54	
C	30	582	15	500	0.60	0.47	1.32	0.72	1.10	0.70	1.32	0.22	1.10	0.70	1.32	0.22	1.10	0.70	1.32	0.22	1.10	0.70	1.32	0.22	
C	31	581	15	250	0.65	0.43	1.67	1.02	1.16	0.61	1.67	0.52	1.16	0.61	1.67	0.52	1.16	0.61	1.67	0.52	1.16	0.61	1.67	0.52	
C	1	5046	12	2,675									0.51	0.40	1.51	1.00	0.51	0.40	1.51	1.00	0.51	0.40	1.51	1.00	New Pipe - 2022 to 2027 (5 Year)
D	1	580	12	105	0.46	0.30	2.40	1.94	0.80	0.40	2.41	1.60	0.80	0.40	2.41	1.60	0.80	0.40	2.41	1.60	0.80	0.40	2.41	1.60	
D	2	571	12	346	0.47	0.43	1.22	0.74	0.83	0.61	1.22	0.39	0.83	0.61	1.22	0.39	0.83	0.61	1.22	0.39	0.83	0.61	1.22	0.39	
D	3	577	12	500	0.47	0.47	1.04	0.57	0.83	0.68	1.04	0.21	0.83	0.68	1.04	0.21	0.83	0.68	1.04	0.21	0.83	0.68	1.04	0.21	
D	4	576	12	500	0.47	0.47	1.04	0.56	0.83	0.68	1.04	0.21	0.83	0.68	1.04	0.21	0.83	0.68	1.04	0.21	0.83	0.68	1.04	0.21	
D	5	575	12	470	0.48	0.48	1.01	0.53	0.83	0.69	1.01	0.18	0.83	0.69	1.01	0.18	0.83	0.69	1.01	0.18	0.83	0.69	1.01	0.18	
D	6	574	12	29	0.48	0.50	0.96	0.48	0.83	0.72	0.96	0.13	0.83	0.72	0.96	0.13	0.83	0.72	0.96	0.13	0.83	0.72	0.96	0.13	
D	7	543	12	471	0.49	0.49	1.00	0.51	0.84	0.70	1.00	0.15	0.84	0.70	1.00	0.15	0.84	0.70	1.00	0.15	0.84	0.70	1.00	0.15	
D	8	578	12	297	0.49	0.49	1.00	0.52	0.84	0.70	1.00	0.16	0.84	0.70	1.00	0.16	0.84	0.70	1.00	0.16	0.84	0.70	1.00	0.16	
D	9	544	12	168	0.50	0.50	0.99	0.49	0.86	0.72	0.99	0.13	0.86	0.72	0.99	0.13	0.86	0.72	0.99	0.13	0.86	0.72	0.99	0.13	
D	10	573	12	205	0.50	0.49	1.02	0.52	0.86	0.70	1.02	0.17	0.86	0.70	1.02	0.17	0.86	0.70	1.02	0.17	0.86	0.70	1.02	0.17	
D	11	545	12	239	0.51	0.50	1.01	0.50	0.86	0.71	1.01	0.15	0.86	0.71	1.01	0.15	0.86	0.71	1.01	0.15	0.86	0.71	1.01	0.15	
D	12	572	12	501	0.51	0.50	1.03	0.52	0.87	0.70	1.03	0.17	0.87	0.70	1.03	0.17	0.87	0.70	1.03	0.17	0.87	0.70	1.03	0.17	
D	13	579	12	31	0.51	0.50	1.02	0.51	0.87	0.69	1.06	0.20	0.87	0.69	1.06	0.20	0.87	0.69	1.06	0.20	0.87	0.69	1.06	0.20	
D	14	570	12	205	0.51	0.50	1.03	0.52	0.87	0.70	1.03	0.16	0.87	0.70	1.03	0.16	0.87	0.70	1.03	0.16	0.87	0.70	1.03	0.16	
D	15	977	15	69	0.51	0.36	1.81	1.30	0.87	0.49	1.81	0.94	0.87	0.49	1.81	0.94	0.87	0.49	1.81	0.94	0.87	0.49	1.81	0.94	
D	16	380	15	12	0.53	0.34	2.09	1.56	0.89	0.47	1.98	1.09	0.89	0.47	1.98	1.09	0.89	0.47	1.98	1.09	0.89	0.47	1.98	1.09	
D	17	504	15	74	0.53	0.35	2.01	1.48	0.89	0.49	1.87	0.98	0.89	0.49	1.87	0.98	0.89	0.49	1.87	0.98	0.89	0.49	1.87	0.98	
D	18	502	15	490	0.53	0.36	1.87	1.35	0.89	0.49	1.87	0.98	0.89	0.49	1.87	0.98	0.89	0.49	1.87	0.98	0.89	0.49	1.87	0.98	
D	19	503	15	490	0.53	0.36	1.87	1.35	0.89	0.48	1.88	0.99	0.89	0.48	1.88	0.99	0.89	0.48	1.88	0.99	0.89	0.48	1.88	0.99	
D	20	975	15	134	0.53	0.36	1.88	1.35	0.89	0.49	1.84	0.95	0.89	0.49	1.84	0.95	0.89	0.49	1.84	0.95	0.89	0.49	1.84	0.95	
D	21	443	15	352	0.53	0.36	1.87	1.34	0.89	0.49	1.87	0.98	0.89	0.49	1.87	0.98	0.89	0.49	1.87	0.98	0.89	0.49	1.87	0.98	
D	22	381	15	141	0.53	0.38	1.69	1.17	0.89	0.51	1.72	0.83	0.89	0.51	1.72	0.83	0.89	0.51	1.72	0.83	0.89	0.51	1.72	0.83	

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Appendix A

Town of Marana
Sewer Infrastructure Improvement Plan (IIP)

Sewer Pipe Capacity Tables

					Existing System				2022 to 2027 (5 Year) without Improvements				2022 to 2027 (5 Year) with Improvements				2027 to 2032 (10 Year) without Improvements				2027 to 2032 (10 Year) with Improvements				
Interceptor Branch	Segment	Model ID	Diameter (in)	Length (ft)	Existing Flow (MGD)	d/D	Existing Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Improvement Notes
E	1	287	12	85	0.19	0.30	0.97	0.78	0.47	0.45	1.11	0.64	0.47	0.45	1.11	0.64	0.39	0.41	1.11	0.72	0.27	0.34	1.11	0.84	
E	2	403	12	500	0.19	0.30	1.01	0.81	0.52	0.51	1.01	0.49	0.52	0.51	1.01	0.49	0.46	0.48	1.01	0.54	0.33	0.39	1.01	0.68	
E	3	402	12	500	0.19	0.30	1.01	0.81	0.52	0.51	1.01	0.49	0.52	0.51	1.01	0.49	0.46	0.48	1.01	0.54	0.33	0.39	1.01	0.68	
E	4	409	12	500	0.19	0.30	1.01	0.81	0.52	0.51	1.01	0.49	0.52	0.51	1.01	0.49	0.46	0.48	1.01	0.54	0.33	0.39	1.01	0.68	
E	5	408	12	500	0.19	0.30	1.01	0.81	0.52	0.51	1.01	0.49	0.52	0.51	1.01	0.49	0.46	0.48	1.01	0.54	0.33	0.39	1.01	0.68	
E	6	407	12	500	0.19	0.30	1.01	0.81	0.57	0.54	1.01	0.43	0.57	0.54	1.01	0.43	0.58	0.54	1.01	0.43	0.45	0.47	1.01	0.56	
E	7	406	12	500	0.19	0.30	1.01	0.81	0.57	0.54	1.01	0.43	0.57	0.54	1.01	0.43	0.58	0.54	1.01	0.43	0.45	0.47	1.01	0.56	
E	8	405	12	487	0.19	0.25	1.38	1.18	0.57	0.45	1.38	0.80	0.57	0.45	1.38	0.80	0.58	0.45	1.38	0.80	0.45	0.39	1.38	0.93	
E	9	404	12	39	0.21	0.32	0.98	0.76	0.58	0.56	0.98	0.40	0.58	0.56	0.98	0.40	0.59	0.56	0.98	0.39	0.46	0.48	0.98	0.52	
E	10	4004	12	24	0.23	0.32	1.05	0.83	0.60	0.45	1.41	0.81	0.60	0.45	1.41	0.81	0.61	0.46	1.41	0.80	0.47	0.40	1.41	0.94	
E	11	400	12	23	0.23	0.31	1.09	0.85	0.60	0.53	1.08	0.48	0.60	0.53	1.08	0.48	0.61	0.54	1.08	0.47	0.48	0.47	1.08	0.60	
E	12	965	12	337	0.29	0.39	0.92	0.63	0.65	0.62	0.93	0.28	0.65	0.62	0.93	0.28	0.67	0.63	0.93	0.26	0.54	0.55	0.93	0.39	
E	13	86	12	158	0.31	0.40	0.92	0.61	0.66	0.63	0.92	0.25	0.66	0.63	0.92	0.25	0.68	0.64	0.92	0.24	0.55	0.56	0.92	0.37	
E	14	91	12	355	0.31	0.40	0.92	0.61	0.66	0.63	0.92	0.25	0.66	0.63	0.92	0.25	0.68	0.64	0.92	0.24	0.55	0.56	0.92	0.37	
E	15	90	12	465	0.31	0.40	0.92	0.61	0.66	0.63	0.92	0.26	0.66	0.63	0.92	0.26	0.68	0.64	0.92	0.24	0.55	0.56	0.92	0.37	
E	16	89	12	299	0.35	0.42	0.93	0.58	0.70	0.66	0.92	0.21	0.70	0.66	0.92	0.21	0.72	0.67	0.92	0.20	0.59	0.58	0.92	0.33	
E	17	88	12	349	0.35	0.43	0.92	0.57	0.72	0.66	0.94	0.22	0.72	0.66	0.94	0.22	0.79	0.71	0.94	0.14	0.67	0.62	0.94	0.27	
E	18	87	12	335	0.35	0.43	0.92	0.56	0.72	0.67	0.92	0.20	0.72	0.67	0.92	0.20	0.80	0.72	0.92	0.12	0.67	0.63	0.92	0.25	
E	19	96	12	319	0.36	0.43	0.92	0.57	0.73	0.68	0.91	0.18	0.73	0.68	0.91	0.18	0.80	0.73	0.91	0.11	0.68	0.64	0.91	0.23	
E	20	81	15	288	0.37	0.32	1.67	1.31	0.74	0.46	1.71	0.97	0.74	0.46	1.71	0.97	0.81	0.48	1.71	0.90	0.68	0.44	1.71	1.03	
E	21	80	15	84	0.37	0.32	1.65	1.28	0.74	0.47	1.66	0.92	0.74	0.47	1.66	0.92	0.81	0.49	1.66	0.84	0.69	0.45	1.66	0.97	
F	1	79	15	448	0.65	0.43	1.73	1.08	1.08	0.57	1.74	0.66	1.08	0.57	1.74	0.66	1.35	0.66	1.74	0.39	1.22	0.62	1.74	0.52	
F	2	78	15	501	0.65	0.42	1.76	1.10	1.08	0.57	1.75	0.68	1.08	0.57	1.75	0.68	1.35	0.66	1.75	0.41	1.22	0.61	1.75	0.53	
F	3	77	15	500	0.65	0.42	1.82	1.16	1.08	0.55	1.82	0.74	1.08	0.55	1.82	0.74	1.35	0.64	1.82	0.47	1.22	0.60	1.82	0.60	
F	4	76	15	500	0.65	0.41	1.89	1.24	1.08	0.54	1.89	0.81	1.08	0.54	1.89	0.81	1.35	0.62	1.89	0.54	1.22	0.59	1.89	0.67	
F	5	75	15	501	0.65	0.42	1.75	1.10	1.08	0.57	1.76	0.68	1.08	0.57	1.76	0.68	1.35	0.66	1.76	0.41	1.22	0.61	1.76	0.54	
F	6	74	15	500	0.65	0.43	1.73	1.07	1.08	0.57	1.73	0.65	1.08	0.57	1.73	0.65	1.35	0.66	1.73	0.38	1.22	0.62	1.73	0.51	
F	7	73	15	499	0.65	0.41	1.83	1.17	1.08	0.55	1.83	0.76	1.08	0.55	1.83	0.76	1.35	0.64	1.83	0.49	1.22	0.60	1.83	0.61	
F	8	72	15	500	0.65	0.42	1.75	1.09	1.08	0.57	1.74	0.66	1.08	0.57	1.74	0.66	1.35	0.66	1.74	0.40	1.22	0.62	1.74	0.52	
F	9	71	15	499	0.65	0.40	1.90	1.25	1.08	0.54	1.90	0.82	1.08	0.54	1.90	0.82	1.35	0.62	1.90	0.56	1.22	0.58	1.90	0.68	
F	10	962	15	476	0.65	0.43	1.70	1.05	1.08	0.58	1.70	0.63	1.08	0.58	1.70	0.63	1.35	0.67	1.70	0.36	1.22	0.63	1.70	0.48	
G	1	970	18	563	0.27	0.20	3.08	2.81	1.87	0.55	3.19	1.33	1.87	0.55	3.19	1.33	3.49	1.00	3.19	-0.30	2.43	0.65	3.19	0.76	
G	2	461	18	500	0.28	0.21	2.97	2.69	1.89	0.58	2.97	1.07	1.89	0.58	2.97	1.07	3.51	1.00	2.97	-0.55	2.45	0.69	2.97	0.52	
G	3	460	18	477	0.28	0.20	3.09	2.81	1.99	0.58	3.08	1.09	1.99	0.58	3.08	1.09	3.61	1.00	3.08	-0.53	2.54	0.69	3.08	0.54	
G	4	5064	18	80	0.28	0.13	7.66	7.39	1.99	0.40	5.99	4.00													Replaced by Improvement
G	1	459	18	57									1.99	0.49	4.13	2.14	3.61	0.72	4.13	0.52	2.54	0.57	4.13	1.59	New Pipe - 2022 to 2027 (5 Year)
G_NEW	2	5120	15	1,369																	1.34	0.64	1.82	0.48	New Pipe - 2027 to 2032 (10 Year)
G_NEW	3	5122	15	516																	1.34	0.61	1.93	0.59	New Pipe - 2027 to 2032 (10 Year)
H	1	978	15	499	0.20	0.24	1.61	1.41	0.35	0.32	1.61	1.26	0.35	0.32	1.61	1.26	0.35	0.32	1.61	1.26	0.35	0.32	1.61	1.26	
H	2	458	15	387	0.23	0.16	3.95	3.72	0.40	0.21	3.96	3.56	0.40	0.21	3.96	3.56	0.40	0.21	3.96	3.56	0.40	0.21	3.96	3.56	
H	3	457	15	394	0.29	0.28	1.65	1.36	0.47	0.36	1.65	1.18	0.47	0.36	1.65	1.18	0.47	0.36	1.65	1.18	0.47	0.36	1.65	1.18	
H	4	456	21	337	0.29	0.19	3.67	3.38	0.47	0.24	3.66	3.20	0.47	0.24	3.66	3.20	0.47	0.24	3.66	3.20	0.47	0.24	3.66	3.20	
H	5	484	12	48	0.29	0.29	1.62	1.33	0.47	0.37	1.63	1.16	0.26	0.27	1.63	1.37	0.26	0.27	1.63	1.37	0.26	0.27	1.63	1.37	
I	1	499	12	349	0.55	0.46	1.26	0.71	2.36	1.00	1.26	-1.10	0.28	0.32	1.26	0.98	0.28	0.32	1.26	0.98	0.28	0.32	1.26	0.98	
I	2	498	12	211	0.55	0.45	1.31	0.77	2.36	1.00	1.31	-1.05	0.28	0.31	1.31	1.03	0.28	0.31	1.31	1.03	0.28	0.31	1.31	1.03	
I	3	487	15	273	0.59	0.41	1.66	1.07	2.41	1.00	1.63	-0.78	0.34	0.31	1.63	1.29	0.34	0.31	1.63	1.29	0.34	0.31	1.63	1.29	
I	4	497	15	400	0.59	0.43	1.57	0.97	2.41	1.00	1.57	-0.84	0.34	0.31	1.57	1.23	0.34	0.31	1.57	1.23	0.34	0.31	1.57	1.23	
I	5	496	15	164	0.61	0.42	1.64	1.03	2.42	1.00	1.63	-0.79	0.35	0.31	1.63	1.28	0.35	0.31	1.63	1.28	0.35	0.31	1.63	1.28	
I	6	495	15	380	0.61	0.41	1.70	1.10	2.42	1.00	1.70	-0.72	0.35	0.31	1.70	1.35	0.35	0.31	1.70	1.35	0.35	0.31	1.70	1.35	
I	7	494	15	406	0.61	0.42	1.65	1.04	2.42	1.00	1.65	-0.77	0.35	0.31	1.65	1.30	0.35	0.31	1.65	1.30	0.35	0.31	1.65	1.30	
I	8	493	15	171	0.61	0.43	1.60	1.00	2.42	1.00	1.61	-0.81	0.35	0.32	1.61	1.26	0.35	0.32	1.61	1.26	0.35	0.32	1.61	1.26	
I	9	492	15	219	0.61	0.43	1.57	0.97	2.63	1.00	1.57	-1.06	0.59	0.42	1.57	0.98	0.59	0.42	1.57	0.98	0.59	0.42	1.57	0.98	
I	10	491	15	500	0.61	0.43	1.61	1.00	2.63	1.00	1.61	-1.02	0.59	0.42	1.61	1.02	0.59	0.42	1.61	1.02	0.59	0.42	1.61	1.02	
I	11	490	15	500	0.61	0.43	1.59	0.98	2.63	1.00	1.58	-1.04	0.59	0.42	1.58	0.99	0.59	0.42	1.58	0.99	0.59	0.42	1.58	0.99	
I	12	489	15	131	0.61	0.40	1.83	1.22	2.63	1.00	1.80	-0.83	0.59	0.39	1.80	1.21	0.59	0.39	1.80	1.21	0.59	0.39	1.80	1.21	
I	13	488	15	40	0.61	0.34	2.38	1.77	2.63	1.00	2.50	-0.13	0.59	0.33	2.50	1.91	0.59	0.33	2.50	1.91	0.59	0.33	2.50	1.91	
I_NEW	1	500	21	77									0.21	0.15	4.06	3.85	0.21	0.15	4.06	3.85	0.21	0.15	4.06	3.85	New Pipe - 2022 to 2027 (5 Year)
I_NEW	2	455	21	318									2.16	0.51	4.11	1.96	3.76	0.75	4.11	0.35	3.88	0.77	4.11	0.23	New Pipe - 2022 to 2027 (5 Year)
I_NEW	3	5018	21	815									2.16	0.50	4.38	2.22	3.76	0.71	4.38	0.61	3.88	0.73	4.38	0.49	New Pipe - 2022 to 2027 (5 Year)
I_NEW	4	5014	21	2,028									2.16	0.44	5.35	3.19	3.76	0.62	5.35	1.58	3.88	0.63	5.35	1.47	New Pipe - 2022 to 2027 (5 Year)
I_NEW	5	5012	21	1,740									2.16	0.44	5.45	3.29	3.76	0.61	5.45	1.68	3.88	0.62	5.45	1.57	New Pipe - 2022 to 2027 (5 Year)
J	1	382	15	359	1.06	0.57	1.74	0.67	3.36	1.00	1.87	-1.49	1.38	0.64	1.87	0.49	1.38	0.64	1.87	0.49	1.38	0.64	1.87	0.49	
J	2	383	15	400	1.06	0.51	2.04	0.98	3.36	1.00	1.93	-1.43	1.38	0.63	1.93	0.54	1.38	0.63	1.93	0.54	1.38	0.63	1.93	0.54	
J	3	384	15	500	1.06	0.54	1.87	0.81	3.36	1.00	1.87	-1.50													Replaced by Improvement
J	4	385	15	500	1.06	0.56	1.77	0.70	3.36	1.00	1.77	-1.59													Replaced by Improvement
J	5	442	15	500	1.06	0.52	1.97	0.91	3.36	1.00	1.98	-1.39													Replaced by Improvement
J	6	441	15	500	1.06	0.54	1.87	0.81	3.36	1.00	1.88	-1.49													Replaced by Improvement
J	7	440	15	500	1.06	0.54	1.87	0.81	3.36	1.00	1.87	-1.49													Replaced by Improvement
J	8	439	15	260	1.06	0.51	2.06	1.00	3.36	1.00	2.06	-1.30													Replaced by Improvement
J	9	967	15	492	1.07	0.56	1.78	0.71	3.42	1.00	1.84	-1.58													Replaced by Improvement
J	10	100	15	500	1.07	0.54	1.87	0.80	3.42	1.00	1.81	-1.61													Replaced by Improvement
J	11	99	15	500	1.07	0.54	1.87	0.80	3.42	1.00	1.87	-1.55													Replaced by Improvement
J	12	98	15	500	1.07	0.54	1.87	0.80	3.42	1.00	1.87	-1.55													Replaced by Improvement
J	13	97	18	537	1.07	0.40	3.18	2.11	3.42	1.00	3.18	-0.25													Replaced by Improvement
J	14	963	18	139	1.07	0.48	2.31	1.24	3.42	1.00	2.31	-1.11													Replaced by Improvement
J	15	39	18	44	1.07	0.46	2.51	1.44	3.42	1.00	2.51	-0.91													Replaced by Improvement

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Appendix A

Town of Marana
Sewer Infrastructure Improvement Plan (IIP)

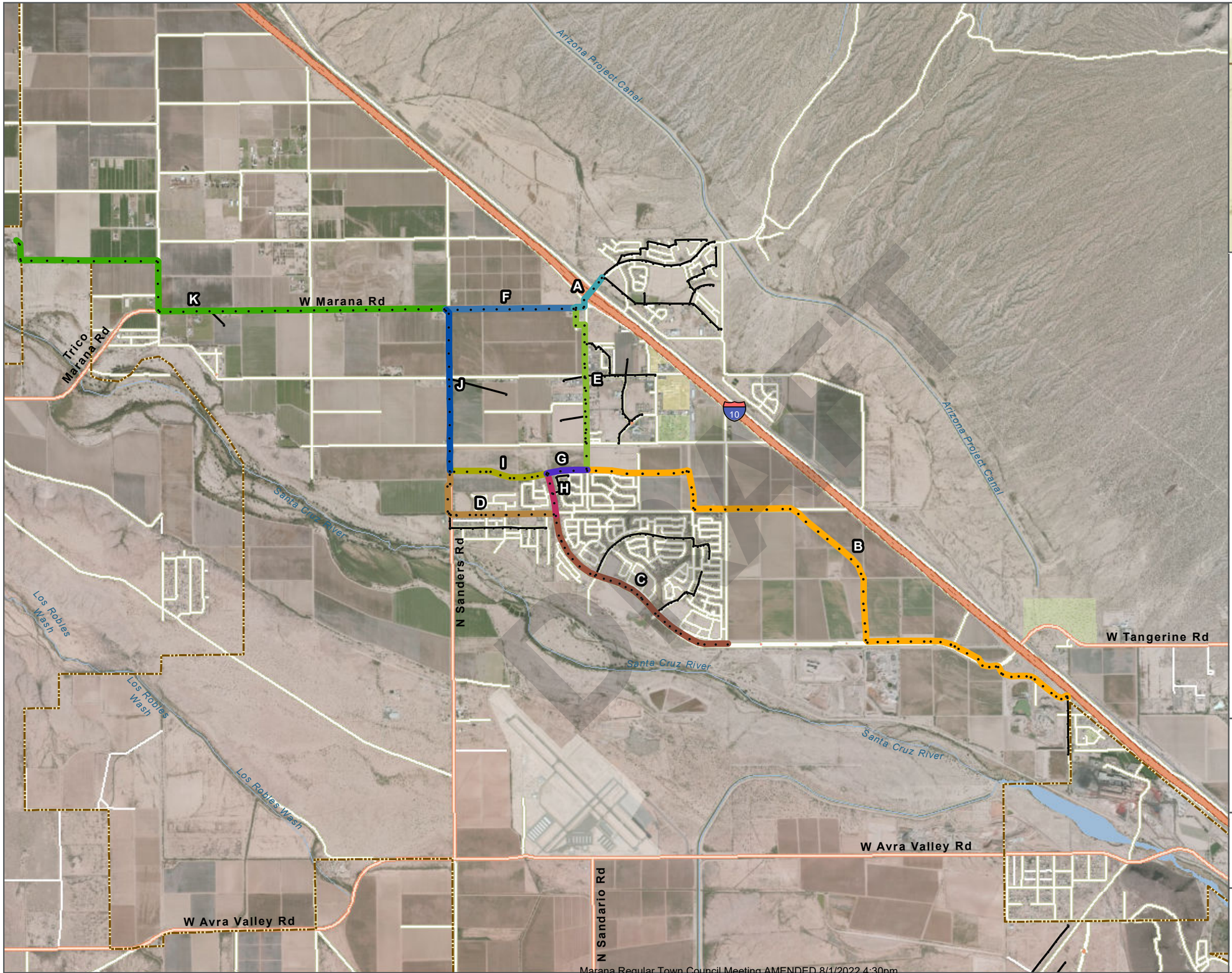
Sewer Pipe Capacity Tables

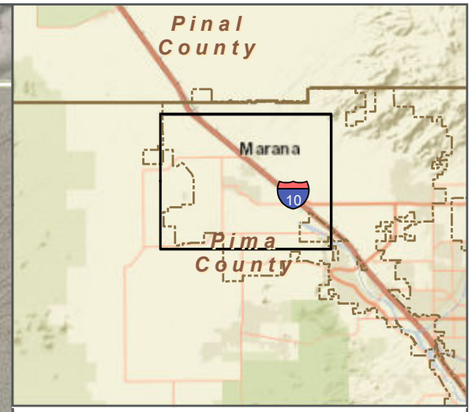
					Existing System				2022 to 2027 (5 Year) without Improvements				2022 to 2027 (5 Year) with Improvements				2027 to 2032 (10 Year) without Improvements				2027 to 2032 (10 Year) with Improvements				
Interceptor Branch	Segment	Model ID	Diameter (in)	Length (ft)	Existing Flow (MGD)	d/D	Existing Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Projected Flow (MGD)	d/D	Projected Capacity (MGD)	Excess Capacity Available (MGD)	Improvement Notes
J_NEW	1	5104	27	308									1.38	0.16	26.57	25.19	1.38	0.16	26.57	25.19	1.38	0.16	26.57	25.19	New Pipe - 2022 to 2027 (5 Year)
J_NEW	2	5010	27	1,245									3.36	0.46	7.84	4.48	4.92	0.57	7.84	2.92	5.04	0.58	7.84	2.80	New Pipe - 2022 to 2027 (5 Year)
J_NEW	3	5008	27	1,342									3.36	0.47	7.55	4.19	4.92	0.59	7.55	2.63	5.04	0.60	7.55	2.51	New Pipe - 2022 to 2027 (5 Year)
J_NEW	4	5006	27	1,338									3.42	0.46	7.76	4.34	4.98	0.58	7.76	2.78	5.10	0.59	7.76	2.66	New Pipe - 2022 to 2027 (5 Year)
J_NEW	5	5004	27	1,229									3.44	0.48	7.47	4.02	5.03	0.60	7.47	2.43	5.15	0.61	7.47	2.32	New Pipe - 2022 to 2027 (5 Year)
K	1	61	18	49	1.64	0.61	2.38	0.74	4.33	1.00	2.92	-1.40	1.52	0.51	2.92	1.40	2.16	0.64	2.92	0.77	2.16	0.64	2.92	0.77	
K	2	50	18	494	1.64	0.53	2.94	1.30	4.33	1.00	2.89	-1.44	1.64	0.54	2.89	1.24	2.32	0.68	2.89	0.57	2.32	0.68	2.89	0.57	
K	3	59	18	500	1.64	0.52	3.04	1.41	4.33	1.00	3.04	-1.29	1.64	0.52	3.04	1.40	2.32	0.65	3.04	0.72	2.32	0.65	3.04	0.72	
K	4	58	18	500	1.64	0.51	3.21	1.57	4.33	1.00	3.06	-1.27	1.64	0.52	3.06	1.42	2.32	0.65	3.06	0.74	2.32	0.65	3.06	0.74	
K	5	57	18	500	1.64	0.54	2.87	1.24	4.33	1.00	3.03	-1.30	1.64	0.52	3.03	1.39	2.32	0.66	3.03	0.71	2.32	0.66	3.03	0.71	
K	6	56	18	500	1.64	0.49	3.40	1.77	4.33	1.00	3.12	-1.21	1.64	0.52	3.12	1.48	2.32	0.64	3.12	0.80	2.32	0.64	3.12	0.80	
K	7	55	18	500	1.64	0.52	3.04	1.41	4.33	1.00	3.04	-1.29	1.64	0.52	3.04	1.40	2.32	0.65	3.04	0.72	2.32	0.65	3.04	0.72	
K	8	54	18	500	1.64	0.54	2.89	1.25	4.33	1.00	3.06	-1.27	1.64	0.52	3.06	1.42	2.32	0.65	3.06	0.74	2.32	0.65	3.06	0.74	
K	9	53	18	500	1.64	0.51	3.13	1.50	4.33	1.00	2.98	-1.35	1.64	0.53	2.98	1.34	2.32	0.66	2.98	0.66	2.32	0.66	2.98	0.66	
K	10	52	18	500	1.64	0.56	2.71	1.07	4.33	1.00	2.87	-1.46	1.64	0.54	2.87	1.23	2.32	0.68	2.87	0.55	2.32	0.68	2.87	0.55	
K	11	51	18	500	1.64	0.52	3.04	1.41	4.33	1.00	3.04	-1.29	1.64	0.52	3.04	1.40	2.32	0.65	3.04	0.72	2.32	0.65	3.04	0.72	
K	12	961	18	500	1.64	0.52	3.04	1.41	4.33	1.00	3.04	-1.28	1.64	0.52	3.04	1.40	2.32	0.65	3.04	0.72	2.32	0.65	3.04	0.72	
K	13	36	18	500	1.64	0.55	2.81	1.17	4.33	1.00	3.02	-1.31	1.64	0.53	3.02	1.38	2.32	0.66	3.02	0.70	2.32	0.66	3.02	0.70	
K	14	35	18	500	1.64	0.53	3.01	1.38	4.33	1.00	2.97	-1.36	1.64	0.53	2.97	1.33	2.32	0.66	2.97	0.65	2.32	0.66	2.97	0.65	
K	15	34	18	500	1.64	0.50	3.29	1.66	4.33	1.00	3.29	-1.04	1.64	0.50	3.29	1.65	2.32	0.62	3.29	0.97	2.32	0.62	3.29	0.97	
K	16	33	18	500	1.64	0.52	3.04	1.41	4.33	1.00	3.04	-1.29	1.64	0.52	3.04	1.40	2.32	0.65	3.04	0.72	2.32	0.65	3.04	0.72	
K	17	32	18	500	1.64	0.51	3.21	1.57	4.33	1.00	3.21	-1.12	1.64	0.51	3.21	1.56	2.32	0.63	3.21	0.89	2.32	0.63	3.21	0.89	
K	18	31	18	500	1.64	0.54	2.87	1.24	4.33	1.00	2.88	-1.45	1.64	0.54	2.88	1.23	2.32	0.68	2.88	0.56	2.32	0.68	2.88	0.56	
K	19	30	18	500	1.64	0.52	3.04	1.41	4.33	1.00	3.04	-1.29	1.64	0.52	3.04	1.40	2.32	0.65	3.04	0.72	2.32	0.65	3.04	0.72	
K	20	29	18	500	1.64	0.52	3.04	1.41	4.33	1.00	3.04	-1.28	1.64	0.52	3.04	1.40	2.32	0.65	3.04	0.72	2.32	0.65	3.04	0.72	
K	21	28	18	500	1.64	0.50	3.28	1.64	4.33	1.00	3.09	-1.24	1.64	0.52	3.09	1.45	2.32	0.65	3.09	0.77	2.32	0.65	3.09	0.77	
K	22	27	18	500	1.64	0.55	2.79	1.15	4.33	1.00	3.15	-1.18	1.64	0.51	3.15	1.51	2.32	0.64	3.15	0.83	2.32	0.64	3.15	0.83	
K	23	26	18	417	1.64	0.52	3.05	1.42	4.33	1.00	3.05	-1.27	1.64	0.52	3.05	1.41	2.32	0.65	3.05	0.73	2.32	0.65	3.05	0.73	
K	24	25	18	72	1.64	0.53	3.01	1.38	4.33	1.00	3.01	-1.32	1.64	0.53	3.01	1.37	2.32	0.66	3.01	0.69	2.32	0.66	3.01	0.69	
K	25	23	18	529	1.64	0.52	3.05	1.41	4.33	1.00	3.05	-1.28	1.64	0.52	3.05	1.41	2.32	0.65	3.05	0.73	2.32	0.65	3.05	0.73	
K	26	22	18	500	1.64	0.52	3.04	1.41	4.33	1.00	3.04	-1.28	1.64	0.52	3.04	1.40	2.32	0.65	3.04	0.72	2.32	0.65	3.04	0.72	
K	27	21	18	500	1.64	0.52	3.04	1.41	4.33	1.00	3.04	-1.28	1.64	0.52	3.04	1.40	2.32	0.65	3.04	0.73	2.32	0.65	3.04	0.73	
K	28	20	18	330	1.64	0.52	3.04	1.41	4.33	1.00	3.04	-1.29	1.64	0.52	3.04	1.40	2.32	0.65	3.04	0.72	2.32	0.65	3.04	0.72	
K	29	960	18	62	1.64	0.32	7.20	5.56	4.33	0.56	7.16	2.83	1.64	0.33	7.16	5.52	2.32	0.39	7.16	4.84	2.32	0.39	7.16	4.84	
K	30	2	24	600	1.64	0.37	5.58	3.95	4.37	0.67	5.59	1.21	4.39	0.67	5.59	1.20	4.49	0.68	5.59	1.10	4.49	0.68	5.59	1.10	
K	31	9	24	600	1.64	0.37	5.58	3.95	4.37	0.67	5.58	1.20	4.39	0.67	5.58	1.19	4.49	0.68	5.58	1.09	4.49	0.68	5.58	1.09	
K	32	8	24	600	1.64	0.37	5.58	3.95	4.37	0.67	5.59	1.21	4.39	0.67	5.59	1.20	4.49	0.68	5.59	1.10	4.49	0.68	5.59	1.10	
K	33	7	24	600	1.64	0.37	5.64	4.01	4.37	0.66	5.64	1.27	4.39	0.66	5.64	1.25	4.49	0.67	5.64	1.16	4.49	0.67	5.64	1.16	
K	34	6	24	600	1.64	0.37	5.58	3.95	4.37	0.67	5.58	1.21	4.39	0.67	5.58	1.20	4.49	0.68	5.58	1.10	4.49	0.68	5.58	1.10	
K	35	5	24	600	1.64	0.37	5.58	3.95	4.37	0.67	5.59	1.21	4.39	0.67	5.59	1.20	4.49	0.68	5.59	1.10	4.49	0.68	5.59	1.10	
K	36	4	24	600	1.64	0.37	5.58	3.95	4.37	0.67	5.58	1.21	4.39	0.67	5.58	1.19	4.49	0.68	5.58	1.10	4.49	0.68	5.58	1.10	
K	37	3	24	600	1.64	0.37	5.58	3.95	4.37	0.67	5.58	1.21	4.39	0.67	5.58	1.19	4.49	0.68	5.58	1.09	4.49	0.68	5.58	1.09	
K	38	959	24	406	1.64	0.37	5.59	3.95	4.37	0.67	5.59	1.22	4.39	0.67	5.59	1.20	4.49	0.68	5.59	1.10	4.49	0.68	5.59	1.10	
K	39	14	24	49	1.64	0.37	5.51	3.88	4.37	0.68	5.41	1.04	4.39	0.68	5.41	1.02	4.49	0.69	5.41	0.92	4.49	0.69	5.41	0.92	
K	40	16	24	583	1.64	0.37	5.56	3.93	4.37	0.67	5.57	1.20	4.39	0.67	5.57	1.18	4.49	0.68	5.57	1.08	4.49	0.68	5.57	1.08	
K	41	15	24	54	1.64	0.37	5.63	3.99	4.37	0.66	5.67	1.30	4.39	0.66	5.67	1.28	4.49	0.67	5.67	1.19	4.49	0.67	5.67	1.19	
K	42	4002	24	5	1.64	0.17	25.39	23.76	4.37	0.38	14.42	10.05	4.39	0.38	14.42	10.03	6.58	0.47	14.42	7.84	6.58	0.47	14.42	7.84	
L_NEW	1	5058	27	1,211									2.82	0.44	7.06	4.24	4.01	0.54	7.06	3.06	4.01	0.54	7.06	3.06	New Pipe - 2022 to 2027 (5 Year)
L_NEW	2	5060	27	1,424									2.91	0.43	7.52	4.61	4.25	0.54	7.52	3.27	4.25	0.54	7.52	3.27	New Pipe - 2022 to 2027 (5 Year)
L_NEW	3	5056	27	5,243									2.91	0.43	7.59	4.68	4.25	0.53	7.59	3.34	4.25	0.53	7.59	3.34	New Pipe - 2022 to 2027 (5 Year)
L_NEW	4	5054	27	5,807									2.95	0.36	10.70	7.75	4.55	0.46	10.70	6.15	4.55	0.46	10.70	6.15	New Pipe - 2022 to 2027 (5 Year)
L_NEW	5	5052	27	5,257																	2.27	0.33	9.43	7.16	New Pipe - 2027 to 2032 (10 Year)
L_NEW	1	5100	27	684									2.95	0.38	9.46	6.51	2.28	0.33	9.46	7.19	2.28	0.33	9.46	7.19	New Pipe - 2022 to 2027 (5 Year)

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Appendix B: Sewer Collection System Capacity Figures

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- Marana Town Limit
- Manhole
- Sewer Line

Sewer Interceptor

- Branch A
- Branch B
- Branch C
- Branch D
- Branch E
- Branch F
- Branch G
- Branch H
- Branch I
- Branch J
- Branch K

SEWER INFRASTRUCTURE IMPROVEMENT PLAN (IIP)

SEWER COLLECTION SYSTEM CAPACITY EXISTING CONDITIONS

N

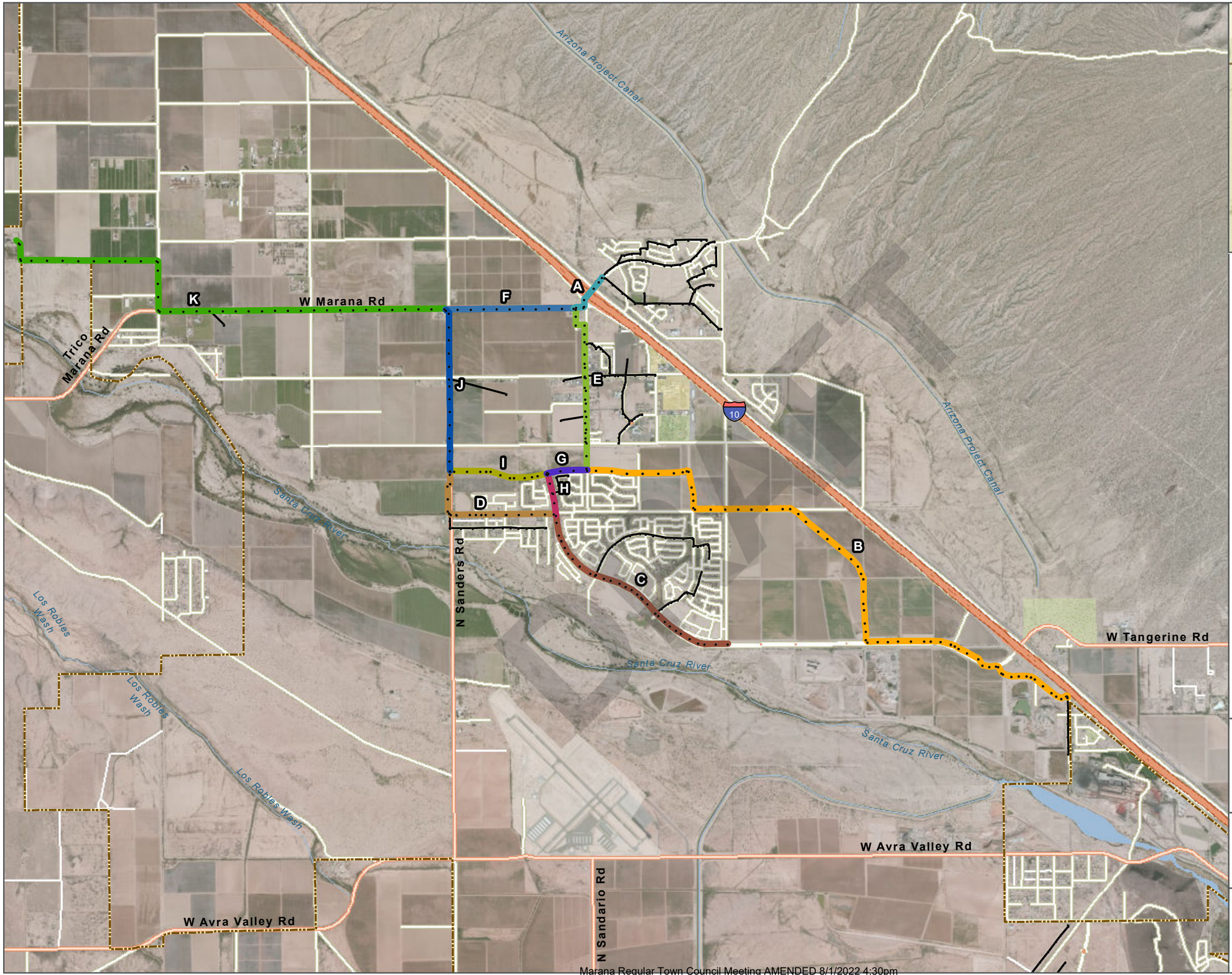
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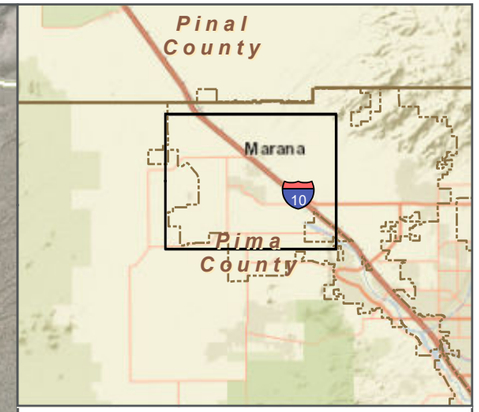
MARANA AZ WATER

HDR

FIGURE A-1

PATH: C:\GABE\PWISE_EXPORT\TEMP\MARANA_SEWERIIP\MARANASEWERIIP_V2.MXD - USER: GALVARAD - DATE: 3/15/2022





- Marana Town Limit
- Manhole
- Sewer Line
- Sewer Interceptor d/D > 0.70

Sewer Interceptor

- Branch A
- Branch B
- Branch C
- Branch D
- Branch E
- Branch F
- Branch G
- Branch H
- Branch I
- Branch J
- Branch K

SEWER INFRASTRUCTURE IMPROVEMENT PLAN (IIP)

SEWER COLLECTION SYSTEM CAPACITY
2022 TO 2027 (5 YEAR)
WITHOUT IMPROVEMENTS

N

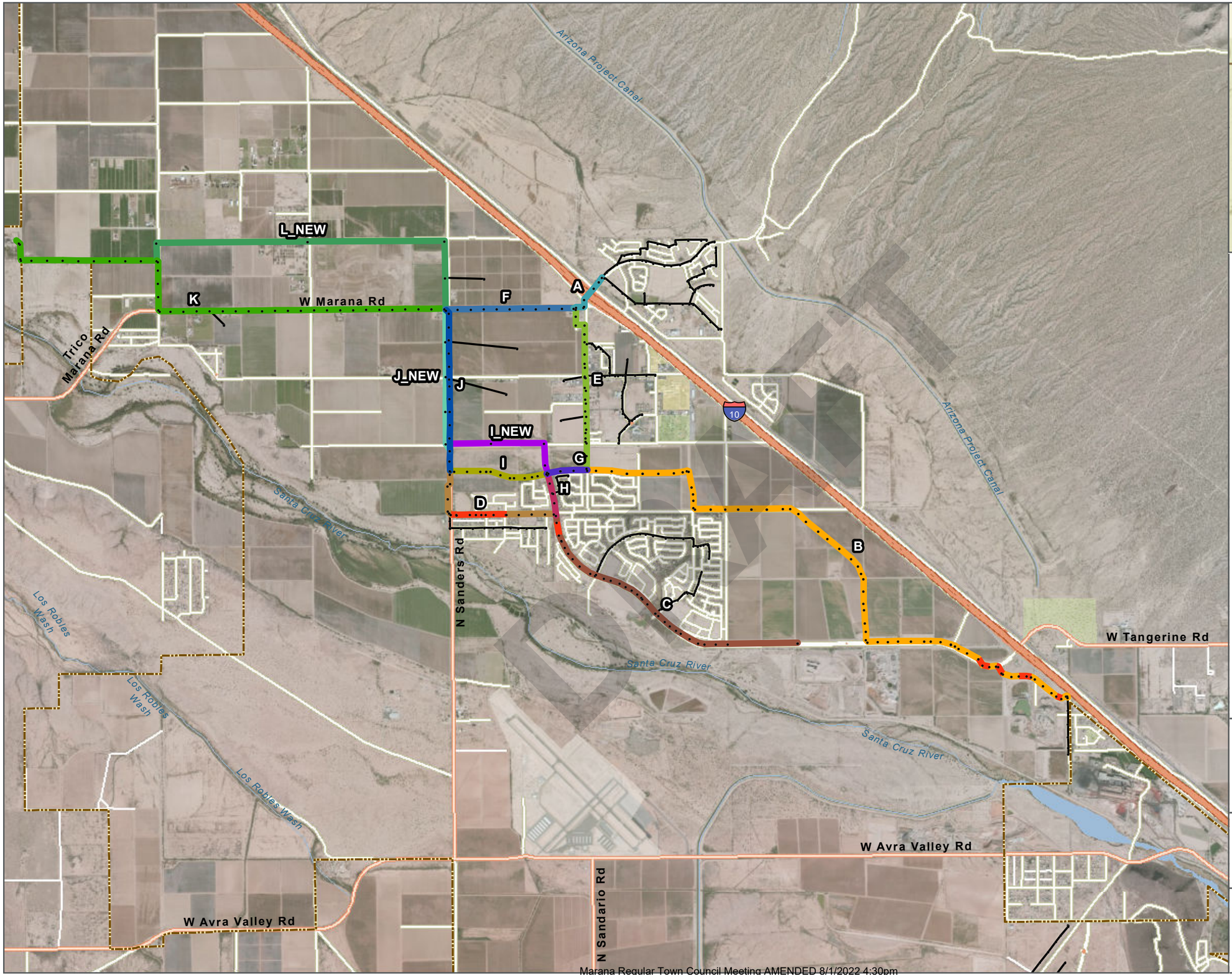
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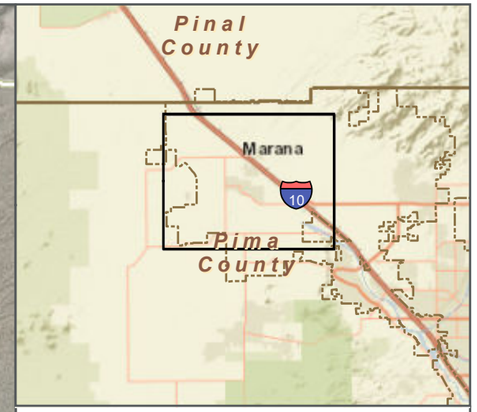
MARANA AZ WATER

HDR

FIGURE A-2

PATH: C:\GABE\PWISE_EXPORT\TEMP\MARANA_SEWERIIP\MARANASEWERIIP_V2.MXD - USER: GALVARAD - DATE: 3/15/2022





- Marana Town Limit
- Manhole
- Sewer Line
- Sewer Interceptor d/D > 0.70

Sewer Interceptor

- Branch A
- Branch B
- Branch C
- Branch D
- Branch E
- Branch F
- Branch G
- Branch H
- Branch I
- New Branch I
- Branch J
- New Branch J
- Branch K
- New Branch L

SEWER INFRASTRUCTURE IMPROVEMENT PLAN (IIP)

SEWER COLLECTION SYSTEM CAPACITY
2022 TO 2027 (5 YEAR)
WITH IMPROVEMENTS

N

0 0.5 1
MILES

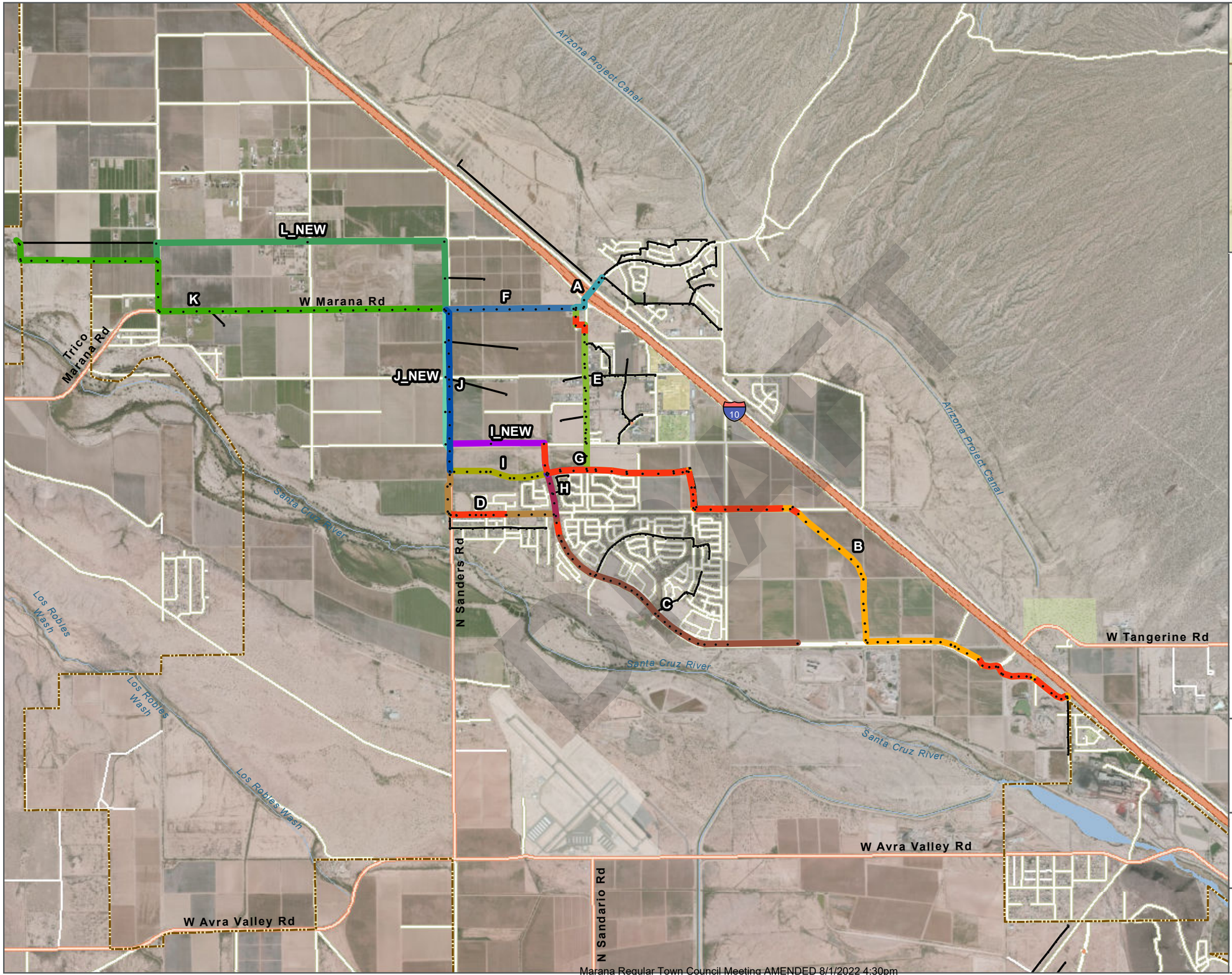
MARANA AZ WATER

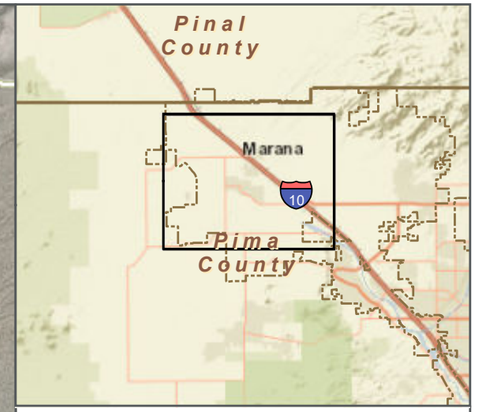
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FIGURE A-3

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PATH: C:\GABE\PWISE_EXPORT\TEMP\MARANA_SEWERIIP\MARANASEWERIIP_V2.MXD - USER: GALVARAD - DATE: 3/15/2022





- Marana Town Limit
- Manhole
- Sewer Line
- Sewer Interceptor d/D > 0.70

Sewer Interceptor

- Branch A
- Branch B
- Branch C
- Branch D
- Branch E
- Branch F
- Branch G
- Branch H
- Branch I
- New Branch I
- Branch J
- New Branch J
- Branch K
- New Branch L

SEWER INFRASTRUCTURE IMPROVEMENT PLAN (IIP)

SEWER COLLECTION SYSTEM CAPACITY
2027 TO 2032 (10 YEAR)
WITHOUT IMPROVEMENTS

N

0 0.5 1
MILES

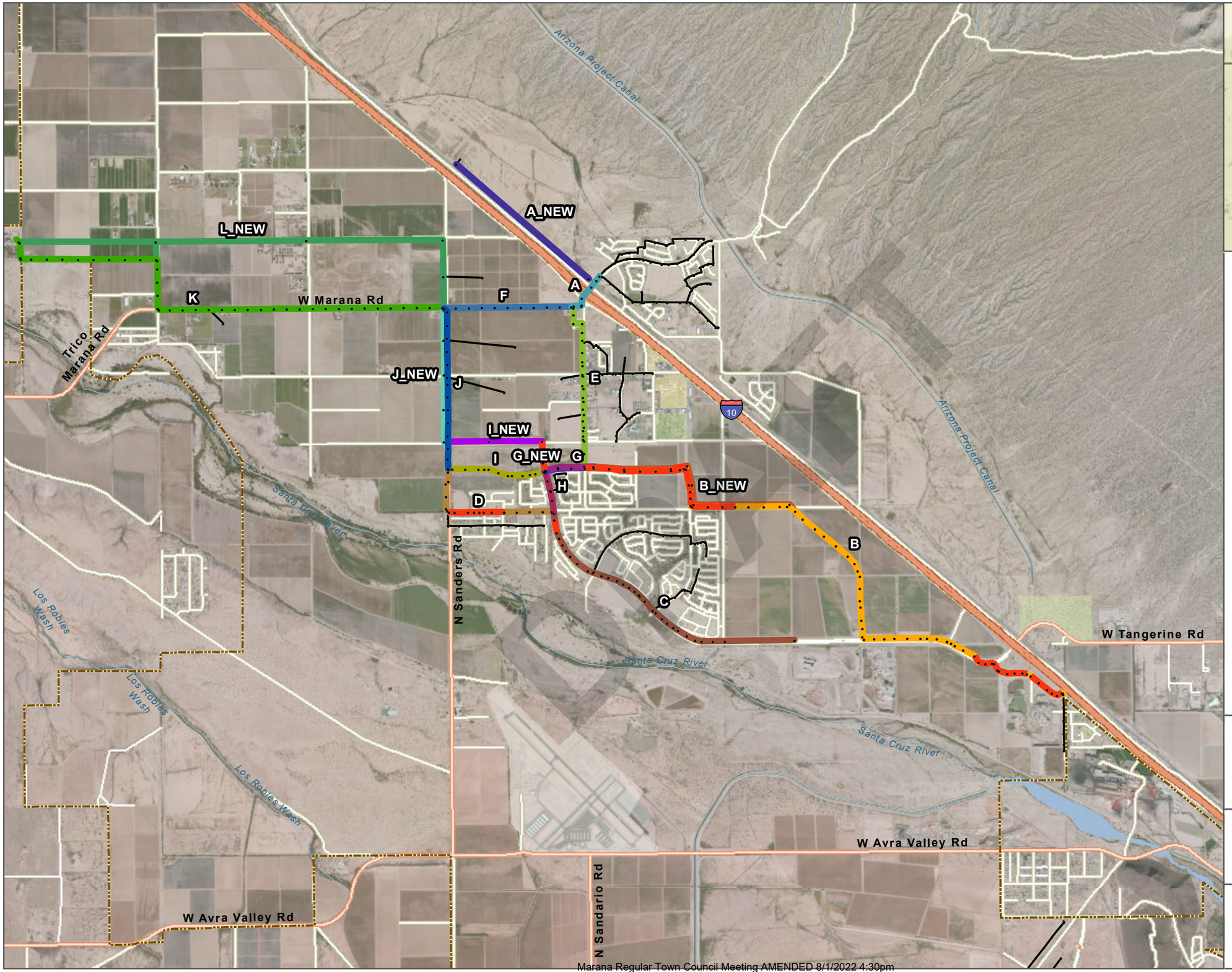
MARANA AZ WATER

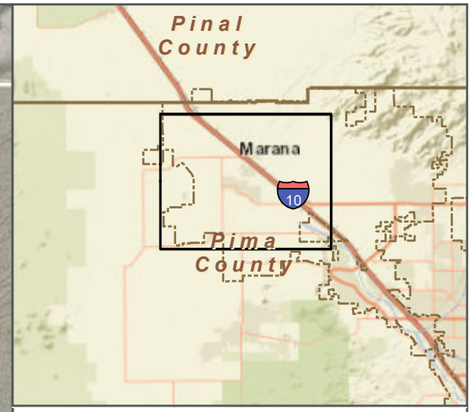
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FIGURE A-4

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PATH: C:\GABE\PWISE_EXPORT\TEMP\MARANA_SEWERIIP\MARANASEWERIIP_V2.MXD - USER: GALVARAD - DATE: 3/15/2022





- Marana Town Limit
- Manhole
- Sewer Line
- Sewer Interceptor d/D > 0.70

Sewer Interceptor

- Branch A
- New Branch A
- Branch B
- New Branch B
- Branch C
- Branch D
- Branch E
- Branch F
- Branch G
- New Branch G
- Branch H
- Branch I
- New Branch I
- Branch J
- New Branch J
- Branch K
- New Branch L

SEWER INFRASTRUCTURE IMPROVEMENT PLAN (IIP)

SEWER COLLECTION SYSTEM CAPACITY
2027 TO 2032 (10 YEAR)
WITH IMPROVEMENTS

N

0 0.5 1
MILES

MARANA AZ
WATER

HDR

FIGURE A-5

PATH: C:\GABE\PWISE_EXPORT\TEMP\MARANA_SEWERIIP\MARANASEWERIIP_V2.MXD - USER: GALVARAD - DATE: 3/15/2022

Appendix C: CIP Cost Tables

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Town of Marana Sewer IIP
CIP Cost Summary

		Construction Costs			Contractor Costs							Other Costs			
			Contingency		Mob/ Demob	General Conditions	Overhead	Bonds + Insurance		Profit		Sales Tax		Design	
Year	ID	Direct Costs	25%	Sub-Total	1%	8%	10%	2%	Sub-Total	6%	Sub-Total	8.1%	Sub-Total	8%	Total
2022-2027	3	$1,451,000	$362,750	**$1,813,750**	$18,138	$145,100	$197,699	$43,494	**$2,218,180**	$133,091	**$2,351,271**	$190,453	**$2,541,724**	$203,338	**$2,745,062**
	4	$1,620,810	$405,203	**$2,026,013**	$20,260	$162,081	$220,835	$48,584	**$2,477,773**	$148,666	**$2,626,439**	$212,742	**$2,839,181**	$227,134	**$3,066,315**
	5	$897,000	$224,250	**$1,121,250**	$11,213	$89,700	$122,216	$26,888	**$1,371,266**	$82,276	**$1,453,542**	$117,737	**$1,571,279**	$125,702	**$1,696,982**
	6	$1,604,000	$401,000	**$2,005,000**	$20,050	$160,400	$218,545	$48,080	**$2,452,075**	$147,124	**$2,599,199**	$210,535	**$2,809,735**	$224,779	**$3,034,513**
	7	$1,782,000	$445,500	**$2,227,500**	$22,275	$178,200	$242,798	$53,415	**$2,724,188**	$163,451	**$2,887,639**	$233,899	**$3,121,538**	$249,723	**$3,371,261**
	8	$20,700,000	$5,175,000	**$25,875,000**	$258,750	$2,070,000	$2,820,375	$620,483	**$31,644,608**	$1,898,676	**$33,543,284**	$2,717,006	**$36,260,290**	$2,900,823	**$39,161,113**
														TOTAL (2022 - 2027)	**$53,075,246**
2027-2032	9	$1,604,000	$401,000	**$2,005,000**	$20,050	$160,400	$218,545	$48,080	**$2,452,075**	$147,124	**$2,599,199**	$210,535	**$2,809,735**	$224,779	**$3,034,513**
	10	$3,071,000	$767,750	**$3,838,750**	$38,388	$307,100	$418,424	$92,053	**$4,694,714**	$281,683	**$4,976,397**	$403,088	**$5,379,486**	$430,359	**$5,809,844**
	11	$2,379,000	$594,750	**$2,973,750**	$29,738	$237,900	$324,139	$71,311	**$3,636,837**	$218,210	**$3,855,047**	$312,259	**$4,167,306**	$333,384	**$4,500,690**
														TOTAL (2027 - 2032)	**$13,345,048**
														TOTAL	**$66,420,294**

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Gravity Pipe

Improvement ID: 3

Design Parameters:

Pipe Length	3600 FT
Pipe Size	24 IN

Assumptions:

Fiscal Year:	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**27/28**	**28/29**	**29/30**	**30/31**	**31/32**	**Total**
CIP Budget:		$1,451,000									$1,451,000

Construction Costs	
Construction	$1,451,000
Contingency @ 25%	$362,750
Subtotal Construction Cost	**$1,813,750**
Contractor Costs	
Mob/Demob (1%)	$18,138
General Conditions (8%)	$145,100
Overhead (10%)	$197,699
Bonds + Insurance (2%)	$43,494
Profit (6%)	$133,091
Subtotal Contractor Cost	**$537,521**
Other Costs	
Sales Tax (8.1%)	$190,453
Engineering Design (8%)	$203,338
Subtotal Other Costs	**$393,791**
Total Project Cost	**$2,745,062**

Construction Costs	**Unit**	**Quantity**	**Unit Cost**	**Extended Cost**
Gravity Pipe	LF	3600	$331	$1,192,320
Manholes	EA	9	$28,750	$258,750
Sub-Total				**$1,451,000**
Contingency (25%)				$362,750
Subtotal Construction Cost				**$1,813,750**

DRAFT

Gravity Pipe

Improvement ID: 4

Design Parameters:

Pipe Length	5300 FT
Pipe Size	27 IN

Assumptions: 31% of construction costs are assigned to existing 15-inch line, and 69% of construction costs are assigned to the new 27-inch line

Fiscal Year:	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**27/28**	**28/29**	**29/30**	**30/31**	**31/32**	**Total**
CIP Budget:		$2,349,000									$2,349,000

Construction Costs	
Construction	$1,620,810 (assume 69% of total construction costs)
Contingency @ 25%	$405,203
Subtotal Construction Cost	**$2,026,013**
Contractor Costs	
Mob/Demob (1%)	$20,260
General Conditions (8%)	$162,081
Overhead (10%)	$220,835
Bonds + Insurance (2%)	$48,584
Profit (6%)	$148,666
Subtotal Contractor Cost	**$600,427**
Other Costs	
Sales Tax (8.1%)	$212,742
Engineering Design (8%)	$227,134
Subtotal Other Costs	**$439,876**
Total Project Cost	**$3,066,315**

Construction Costs	**Unit**	**Quantity**	**Unit Cost**	**Extended Cost**
Gravity Pipe	LF	5300	$373	$1,974,780
Manholes	EA	13	$28,750	$373,750
Sub-Total				**$2,349,000**
Contingency (25%)				$587,250
Subtotal Construction Cost				**$2,936,250**

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Gravity Pipe

Improvement ID: 5

Design Parameters:

Pipe Length	2800 FT
Pipe Size	27 IN

Assumptions:

Fiscal Year:	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**27/28**	**28/29**	**29/30**	**30/31**	**31/32**	**Total**
CIP Budget:		$897,000									$897,000

Construction Costs	
Construction	$897,000
Contingency @ 25%	$224,250
Subtotal Construction Cost	**$1,121,250**
Contractor Costs	
Mob/Demob (1%)	$11,213
General Conditions (8%)	$89,700
Overhead (10%)	$122,216
Bonds + Insurance (2%)	$26,888
Profit (6%)	$82,276
Subtotal Contractor Cost	**$332,292**
Other Costs	
Sales Tax (8.1%)	$117,737
Engineering Design (8%)	$125,702
Subtotal Other Costs	**$243,439**
Total Project Cost	**$1,696,982**

Construction Costs	**Unit**	**Quantity**	**Unit Cost**	**Extended Cost**
Gravity Pipe	LF	2800	$248	$695,520
Manholes	EA	7	$28,750	$201,250
Sub-Total				**$897,000**
Contingency (25%)				$224,250
Subtotal Construction Cost				**$1,121,250**

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Gravity Pipe

Improvement ID: 6

Design Parameters:

Pipe Length	5300 FT
Pipe Size	27 IN

Assumptions:

Fiscal Year:	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**27/28**	**28/29**	**29/30**	**30/31**	**31/32**	**Total**
CIP Budget:		$1,604,000									$1,604,000

Construction Costs	
Construction	$1,604,000
Contingency @ 25%	$401,000
Subtotal Construction Cost	**$2,005,000**
Contractor Costs	
Mob/Demob (1%)	$20,050
General Conditions (8%)	$160,400
Overhead (10%)	$218,545
Bonds + Insurance (2%)	$48,080
Profit (6%)	$147,124
Subtotal Contractor Cost	**$594,199**
Other Costs	
Sales Tax (8.1%)	$210,535
Engineering Design (8%)	$224,779
Subtotal Other Costs	**$435,314**
Total Project Cost	**$3,034,513**

Construction Costs	**Unit**	**Quantity**	**Unit Cost**	**Extended Cost**
Gravity Pipe	LF	5300	$248	$1,316,520
Manholes	EA	10	$28,750	$287,500
Sub-Total				**$1,604,000**
Contingency (25%)				$401,000
Subtotal Construction Cost				**$2,005,000**

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Gravity Pipe

Improvement ID: 7

Design Parameters:

Pipe Length	5900 FT
Pipe Size	27 IN

Assumptions:

Fiscal Year:	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**27/28**	**28/29**	**29/30**	**30/31**	**31/32**	**Total**
CIP Budget:		$1,782,000									$1,782,000

Construction Costs	
Construction	$1,782,000
Contingency @ 25%	$445,500
Subtotal Construction Cost	**$2,227,500**
Contractor Costs	
Mob/Demob (1%)	$22,275
General Conditions (8%)	$178,200
Overhead (10%)	$242,798
Bonds + Insurance (2%)	$53,415
Profit (6%)	$163,451
Subtotal Contractor Cost	**$660,139**
Other Costs	
Sales Tax (8.1%)	$233,899
Engineering Design (8%)	$249,723
Subtotal Other Costs	**$483,622**
Total Project Cost	**$3,371,261**

Construction Costs	**Unit**	**Quantity**	**Unit Cost**	**Extended Cost**
Gravity Pipe	LF	5900	$248	$1,465,560
Manholes	EA	11	$28,750	$316,250
Sub-Total				**$1,782,000**
Contingency (25%)				$445,500
Subtotal Construction Cost				**$2,227,500**

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Marana WRF Expansion

Improvement ID: 8

Design Parameters:

Water Reclamation Facility 1.5 MGD

Assumptions:

Fiscal Year:	22/23	23/24	24/25	25/26	26/27	27/28	28/29	29/30	30/31	31/32	Total
CIP Budget:			$2,900,823	$9,000,000	$9,000,000						$20,900,823

Construction Costs	
Construction	$20,700,000
Contingency @ 25%	$5,175,000
Subtotal Construction Cost	**$25,875,000**
Contractor Costs	
Mob/Demob (1%)	$258,750
General Conditions (8%)	$2,070,000
Overhead (10%)	$2,820,375
Bonds + Insurance (2%)	$620,483
Profit (6%)	$1,898,676
Subtotal Contractor Cost	**$7,668,284**
Other Costs	
Sales Tax (8.1%)	$2,717,006
Engineering Design (8%)	$2,900,823
Subtotal Other Costs	**$5,617,829**
Total Project Cost	**$39,161,113**

Construction Costs	Unit	Quantity	Unit Cost	Extended Cost
Treatment	EA	1.5	$13,800,000	$20,700,000
Sub-Total				**$20,700,000**
Contingency (25%)				$5,175,000
Subtotal Construction Cost				**$25,875,000**

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Gravity Pipe

Improvement ID: 9

Design Parameters:

Pipe Length	5300 FT
Pipe Size	27 IN

Assumptions:

Fiscal Year:	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**27/28**	**28/29**	**29/30**	**30/31**	**31/32**	**Total**
CIP Budget:									$1,604,000		$1,604,000

Construction Costs	
Construction	$1,604,000
Contingency @ 25%	$401,000
Subtotal Construction Cost	**$2,005,000**
Contractor Costs	
Mob/Demob (1%)	$20,050
General Conditions (8%)	$160,400
Overhead (10%)	$218,545
Bonds + Insurance (2%)	$48,080
Profit (6%)	$147,124
Subtotal Contractor Cost	**$594,199**
Other Costs	
Sales Tax (8.1%)	$210,535
Engineering Design (8%)	$224,779
Subtotal Other Costs	**$435,314**
Total Project Cost	**$3,034,513**

Construction Costs	**Unit**	**Quantity**	**Unit Cost**	**Extended Cost**
Gravity Pipe	LF	5300	$248	$1,316,520
Manholes	EA	10	$28,750	$287,500
Sub-Total				**$1,604,000**
Contingency (25%)				$401,000
Subtotal Construction Cost				**$2,005,000**

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Gravity Pipe

Improvement ID: 10

Design Parameters:

Pipe Length	11500 FT
Pipe Size	15 IN

Assumptions:

Fiscal Year:	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**27/28**	**28/29**	**29/30**	**30/31**	**31/32**	**Total**
CIP Budget:									$3,071,000		$3,071,000

Construction Costs	
Construction	$3,071,000
Contingency @ 25%	$767,750
Subtotal Construction Cost	**$3,838,750**
Contractor Costs	
Mob/Demob (1%)	$38,388
General Conditions (8%)	$307,100
Overhead (10%)	$418,424
Bonds + Insurance (2%)	$92,053
Profit (6%)	$281,683
Subtotal Contractor Cost	**$1,137,647**
Other Costs	
Sales Tax (8.1%)	$403,088
Engineering Design (8%)	$430,359
Subtotal Other Costs	**$833,447**
Total Project Cost	**$5,809,844**

Construction Costs	**Unit**	**Quantity**	**Unit Cost**	**Extended Cost**
Gravity Pipe	LF	11500	$207	$2,380,500
Manholes	EA	24	$28,750	$690,000
Sub-Total				**$3,071,000**
Contingency (25%)				$767,750
Subtotal Construction Cost				**$3,838,750**

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Gravity Pipe, Lift Station, and Force Main

Improvement ID: 11

Design Parameters:

Pipe Length	6800 FT
Pipe Size	18 IN
Lift Station	210 gpm
	0.3024 MGD
Force Main	6800 FT
Force Main Size	6 IN

Assumptions:

Fiscal Year:	**22/23**	**23/24**	**24/25**	**25/26**	**26/27**	**27/28**	**28/29**	**29/30**	**30/31**	**31/32**	**Total**
CIP Budget:									$2,379,000		$2,379,000

Construction Costs	
Construction	$2,379,000
Contingency @ 25%	$594,750
Subtotal Construction Cost	**$2,973,750**
Contractor Costs	
Mob/Demob (1%)	$29,738
General Conditions (8%)	$237,900
Overhead (10%)	$324,139
Bonds + Insurance (2%)	$71,311
Profit (6%)	$218,210
Subtotal Contractor Cost	**$881,297**
Other Costs	
Sales Tax (8.1%)	$312,259
Engineering Design (8%)	$333,384
Subtotal Other Costs	**$645,643**
Total Project Cost	**$4,500,690**

Construction Costs	**Unit**	**Quantity**	**Unit Cost**	**Extended Cost**
Gravity Pipe	LF	6800	$248	$1,689,120
Manholes	EA	24	$28,750	$690,000
Lift Station	MGD	0.302	$690,000	$208,656
Force Main	LF	6800	$55	$375,360
Sub-Total				**$2,379,000**
Contingency (25%)				$594,750
Subtotal Construction Cost				**$2,973,750**

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Council-Regular Meeting **A3**

Meeting Date: 08/03/2022

To: Mayor and Council

Submitted For: George Cardieri, Real Property Manager

From: George Cardieri, Real Property Manager

Date: August 3, 2022

Strategic Plan Focus Area:
Not Applicable

Subject: Resolution No. 2022-077: Relating to Real Estate; approving and authorizing the Town Engineer to execute an Easement Amendment and an Easement Encroachment Agreement with El Paso Natural Gas Company (EPNG) specifying EPNG's consent for dedicated public improvements encroaching inside the gas line easement within the Saguaro Bloom subdivision (George Cardieri)

Discussion:

El Paso Natural Gas Company (EPNG) has an existing easement and natural gas pipeline traversing through public rights-of-way, public drainageways, and open space within the Saguaro Bloom subdivision which have been dedicated to the Town. EPNG has requested an Easement Amendment to refine the width of the easement and an Easement Encroachment Agreement specifying EPNG's consent for dedicated public improvements encroaching inside the easement. The proposed resolution will authorize the Town Engineer to sign the Easement Amendment and the Easement Encroachment Agreement.

Staff Recommendation:

Staff recommends adoption of Resolution No. 2022-077, authorizing the Town Engineer, on behalf of the Town, to execute the Easement Amendment and Easement Encroachment Agreement in substantially the forms attached to and incorporated in this resolution as Exhibits A and B, as requested by El Paso Natural Gas for Saguaro Bloom.

Suggested Motion:

I move to adopt Resolution No. 2022-077, authorizing the Town Engineer to execute the Easement Amendment and Easement Encroachment Agreement as requested by El Paso Natural Gas for Saguaro Bloom.

Attachments

Resolution No. 2022-077

Exhibit A (Easement Amendment)

Exhibit B (Easement Encroachment Agreement)

MARANA RESOLUTION NO. 2022-077

RELATING TO REAL ESTATE; APPROVING AND AUTHORIZING THE TOWN ENGINEER TO EXECUTE AN EASEMENT AMENDMENT AND AN EASEMENT ENCROACHMENT AGREEMENT WITH EL PASO NATURAL GAS COMPANY (EPNG) SPECIFYING EPNG'S CONSENT FOR DEDICATED PUBLIC IMPROVEMENTS ENCROACHING INSIDE THE GAS LINE EASEMENT WITHIN THE SAGUARO BLOOM SUBDIVISION

WHEREAS the Town of Marana owns public rights-of-way, public drainageways, and open space within the Saguaro Bloom subdivision; and

WHEREAS El Paso Natural Gas Company ("EPNG") has an existing easement and natural gas pipeline traversing through the Town-owned properties within Saguaro Bloom; and

WHEREAS EPNG has requested from the Town an Easement Amendment to refine the width of the easement and an Easement Encroachment Agreement specifying EPNG's consent for dedicated public improvements encroaching inside the gas line easement within Saguaro Bloom; and

WHEREAS the Mayor and Council of the Town of Marana find that the public interests are served by approving this resolution.

NOW, THEREFORE, BE IT RESOLVED by the Mayor and Council of the Town of Marana, Arizona, authorizing the Town Engineer, on behalf of the Town, to execute the Easement Amendment and the Easement Encroachment Agreement in substantially the forms attached to and incorporated in this resolution as Exhibits A and B, respectively.

PASSED AND ADOPTED BY THE MAYOR AND COUNCIL OF THE TOWN OF MARANA, ARIZONA, this 3rd day of August 2022.

Mayor Ed Honea

ATTEST:

Cherry L. Lawson, Town Clerk

APPROVED AS TO FORM:

Jane Fairall, Town Attorney

RETURN TO:
Kelley Sims, Senior Land Agent
El Paso Natural Gas Company
5151 E. Broadway, Suite 1680
Tucson, AZ 85711

Easement Amendment

(Saguaro Springs Block A, Block D, and N Saguaro Peaks Blvd)

STATE OF ARIZONA)
)
COUNTY OF PIMA)

This Easement Amendment, is made and entered into this ____ day of _____, 2022, by and between the Town of Marana, an Arizona municipal corporation (hereinafter referred to as the "**Town**"), and El Paso Natural Gas Company, L.L.C., a Delaware limited liability (hereinafter "**EPNG**"). EPNG and Town are also referred to herein as "**the Parties**".

WHEREAS on September 19, 1933, Arizona Building Company ("**Original Grantor**"), duly executed and delivered to Western Gas Company, a Corporation ("**Original Grantee**"), that certain Right of Way and Easement recorded on September 28, 1933, in Book 50, Page 619 of Miscellaneous Records in the Official Records of Pima County, Arizona (the "**Easement**"), for the purposes of constructing, maintaining, and operating one or more pipelines and all necessary appurtenances thereto over and through, among other lands, the following described property in Pima County, Arizona (the "**Easement Property**"):

Portion	Section	Township	Range	B & M
N½ and SE¼	18	12 South	12 East	Gila & Salt River

WHEREAS EPNG is the successor in interest to the Original Grantee in the Easement pursuant to that instrument recorded on July 2, 1936, in Book 190, Page 544 of Deeds in the Official Records of Pima County, Arizona; and

WHEREAS on June 30, 2006, First American Title Insurance Company, a California corporation, as Trustee under Trust No. 9089 (the "**Trust**"), as one of the successors in interest to the Original Grantor, and EPNG, as the successor in interest to the Original Grantee, amended the Easement by that certain Amendment to Right of Way and Easement recorded on August 16, 2006, in Docket 12869, Page 1523, Sequence No. 20061580380 in the Official Records of Pima County, Arizona (the "**2006 Easement Amendment**") with the intention of specifically defining the easement's width and location over the Easement Property.

WHEREAS, the Town owned and does own a portion of the Easement Property, specifically Block A, Block D, and N Saguaro Peaks Blvd, pursuant to the Final Plat of Saguaro Springs, Blocks 1 thru 10 & A thru D and Lots 1 thru 9 & A and B recorded on April 12, 2004, at Book 58, Page 23 of Maps and Plats; and

WHEREAS, the Town was one of the successors in interest to the Original Grantor in 2006, and owned a portion of the property reflected in the 2006 Easement Amendment Exhibit "A", but the Town was inadvertently not included in the execution of the 2006 Easement Amendment; and

WHEREAS, the Parties have agreed that the Town will execute this 2022 Easement Amendment to specifically define the Easement's width and location over and through the Town's property to be consistent and identical with that 50' strip of land described in Exhibit A of the 2006 Easement Amendment.

NOW THEREFORE, for and in consideration of the mutual benefits to the Parties, the receipt and sufficiency of which is hereby acknowledged, it is understood and agreed as follows:

1. Right of Way and Easement Defined. The Town and EPNG do hereby amend the Easement over and through the Town's property to that 50-foot strip of land being more particularly described and depicted on Exhibit "A" of the 2006 Easement Amendment, incorporated herein for all purposes.

2. Runs with the Land. The terms and conditions of this Easement Amendment shall be binding on the Parties, their heirs, successors, and assigns.

3. Except as hereby amended, all terms, conditions, and provisions of the Easement and the 2006 Easement Amendment, are continued in full force and effect.

AGREED TO AND ACCEPTED BY:

Town of Marana, an Arizona
Municipal corporation

By: _____
_____(printed name)

Its: _____

ACKNOWLEDGEMENT

STATE OF ARIZONA)
)
COUNTY OF PIMA)

This instrument was acknowledged before me on the _____ day of _____, 2022, by _____, the _____ for the Town of Marana, who represented him/herself to be a person duly authorized to execute real estate documents on behalf of the Town.

My Commission Expires:

_____

_____
Notary Public in and for
Pima County, State of Arizona

AGREED TO AND ACCEPTED BY:

El Paso Natural Gas Company, L.L.C.
a Delaware limited liability company

By: _____
M. James Pagonis

Its: Attorney in Fact

ACKNOWLEDGEMENT

STATE OF COLORADO)
)
COUNTY OF EL PASO)

This instrument was acknowledged before me on the _____ day of _____, 2022, by M. James Pagonis, Attorney-In-Fact for El Paso Natural Gas Company, L.L.C., a Delaware limited liability company, who represented himself to be a person duly authorized to execute real estate documents on behalf of El Paso Natural Gas Company, L.L.C.

My Commission Expires:

_____

_____
Notary Public in and for
El Paso County, State of Colorado

RETURN TO:
Kelley Sims, Senior Land Agent
El Paso Natural Gas Company
5151 E. Broadway, Suite 1680
Tucson, AZ 85711

Easement Encroachment Agreement

(Saguaro Springs Block A, Block D, N Saguaro Peaks Blvd, W Garnet Range Loop & N Crooked Peak Trail)

STATE OF ARIZONA)
)
COUNTY OF PIMA)

THIS AGREEMENT, is made and entered into this ____ day of _____, 2022, by and between the Town of Marana, an Arizona municipal corporation (hereinafter referred to as the **"Town"**), and El Paso Natural Gas Company, L.L.C., a Delaware limited liability (hereinafter **"EPNG"**). EPNG and Town are also referred to herein as **"the Parties"**.

WHEREAS on September 19, 1933, Arizona Building Company (**"Original Grantor"**), duly executed and delivered to Western Gas Company, a Corporation (**"Original Grantee"**), that certain Right of Way and Easement recorded on September 28, 1933, in Book 50, Page 619 of Miscellaneous Records in the Official Records of Pima County, Arizona (the **"Easement"**), for the purposes of constructing, maintaining, and operating one or more pipelines and all necessary appurtenances thereto (the **"Pipeline"** or the **"Facilities"**) over and through, among other lands, the following described property in Pima County, Arizona (the "**Easement Property**"):

Portion	Section	Township	Range	B & M
N½ and SE¼	18	12 South	12 East	Gila & Salt River

WHEREAS EPNG is the successor in interest to the Original Grantee in the Easement pursuant to that instrument recorded on July 2, 1936, in Book 190, Page 544 of Deeds in the Official Records of Pima County, Arizona; and

WHEREAS on June 30, 2006, First American Title Insurance Company, a California corporation, as Trustee under Trust No. 9089, one successor in interest to the Original Grantor, and EPNG, the successor in interest to the Original Grantee, amended the Easement by that certain Amendment to Right of Way and Easement recorded on August 16, 2006, in Docket 12869, Page 1523, Sequence No. 20061580380 in the Official Records of Pima County, Arizona to specifically define the easement, or right of way location (the **"ROW"**) over and through the Easement Property; and

WHEREAS on _____, 2022, the Town, another successor in interest to the Original Grantor, and EPNG, the successor in interest to the Original Grantee, amended the Easement by that certain Easement Amendment recorded on _____, 2022, at Sequence No. _____ in the Official Records of Pima County, Arizona to further specifically define the ROW over and through the Easement Property; and

WHEREAS, the Town owns a portion of the Easement Property within the residential subdivision known as Saguaro Bloom (fka Saguaro Springs), specifically Block A, Block D, N Saguaro Peaks Blvd, W Garnet Range Loop, and N Crooked Peak Trail (the **"Town Property"**) pursuant to the Final Plat of Saguaro Springs, Blocks 1 thru 10 & A thru D and Lots 1 thru 9 & A and B recorded on April 12, 2004, at Book 58, Page 23 of Maps and Plats and the Final Plat for Saguaro Bloom Block 1, Lots 1-389, Common Area "A", Common Area "B", Common Area "C", & Blocks 1A, 1B, 1C recorded on February 23, 2018, at Seq. # 20180540069 in the Official Records of Pima County, Arizona; and

WHEREAS, the Town is successor in interest to the Original Grantor in that portion of the Easement over and through the Town Property, and Town Property is encumbered by the Easement; and

WHEREAS, the Easement prohibits the Town from uses that hinder, conflict, or interfere with EPNG's easement rights as well as prohibiting the placement of structures upon, under, or across the Easement without EPNG's written consent; and

WHEREAS, the Town desires to construct, own, operate, maintain, use, and/or remove the following items within the Easement, at no expense to EPNG and without interfering with the construction, operation, and safety of the EPNG Facilities:

(a) Public Street named N Saguaro Peaks Blvd, with curbs, gutters, sidewalks, and utilities including an 8" PVC water line and irrigation lines and sleeves;
(b) Public Street named W Garnet Range Loop, with curbs, gutters, sidewalks, and utilities including an 8" ductile iron water line and irrigation lines and sleeves;
(c) Public Street named N Crooked Peak Trail, with curbs, gutters, sidewalks, and utilities including an 8" PVC water line, an 8" sewer line, and a 15" sewer line in the Common Area south of Crooked Peak Trail installed by easement right;
(d) A combination Concrete Drainage Channel and ADA-Compliant Pedestrian Walkway, with handrails and riprap;
(e) An existing 12" PVC sewer line crossing a portion of the ROW in Block A and a portion of the ROW in Block 6, said sewer line installed within Block 6 by easement right;
(f) (4) Drainage Channels; and
(g) Various groundcovers, shrubs, and plants with a mature height of under 5', which plants shall not include trees or Saguaro cacti.

Items (a) thru (g) above are individually and collectively referred to herein as the **"Encroachments"**.

WHEREAS, EPNG agrees to the Town's construction, installation, and maintenance of the Encroachments, which would otherwise be prohibited by certain provisions of the Easement, subject to Town's agreeing to the terms and conditions set forth below.

NOW THEREFORE, for and in consideration of the mutual benefits to the Parties, the receipt and sufficiency of which is hereby acknowledged, it is understood and agreed as follows:

1. Locations and Grade. EPNG consents to Town's construction, installation, and maintenance of the Encroachments, under the terms stated herein, in the locations depicted on the following:
   (a) Preliminary Plat for Saguaro Bloom "7A", Lots 1-202, Blocks "7B" and "7C", (Future Residential) and Common Areas "A" and "B" PRV1811-003, accepted by Town on April 2, 2019;
   (b) Private Grading and Drainage Improvement Plans Saguaro Bloom "7A", Lots 1-202 ENG1905-006, approved by Town on June 24, 2019;

(c) Offsite Public Water to Serve Saguaro Bloom "7A" (Garnet Range Loop) ENG1906-006, accepted by Town on September 24, 2019;
(d) Public Paving, Drainage and Sewer Improvement Plans for Saguaro Bloom "7A", Garnet Range Loop Public Streets ENG1906-007, accepted by Town on September 24, 2019;
(e) Private Grading and Drainage Improvement Plans Saguaro Bloom "7C", Lots 378-494, ENG2109-002, accepted by Town on January 6, 2022;
(f) Public Improvement & Grading Plans for Saguaro Bloom, Block 1, Lots 1-395 Common Areas A, B, and C, dated August, 2017; and
(g) Public Paving, Drainage and Utility Improvement Plans for Saguaro Bloom Community Park, ENG2011-005, approved by Town on March 2, 2021.

Section 1, Items (a) thru (g) are individually and collectively referred to herein as the **"Plans"**.

2. Permission is Limited. The permission granted herein is limited exclusively to the Encroachments defined above and as either set out in the Plans or as installed in accordance with EPNG standards. No other structures of any kind, including but not limited to utilities, poles, pedestals, manholes, drainage improvements, and/or walls shall be constructed within the ROW.

3. Construction Requirements.
   a. **Town or the Contractor constructing and/or maintaining the Encroachments (Contractor) shall call in an Arizona 811 request at least forty-eight (48) hours prior to commencing any construction activities within twenty-five (25) feet of the Pipeline, including but not limited to earthwork and heavy equipment travel, and arrange for an EPNG representative to be onsite monitoring such activities.** Heavy Equipment is defined as any vehicle in excess of a maximum axle load of 24,000 pounds. Heavy equipment shall only be allowed to cross the Pipeline at locations designated by EPNG and subject to weight restrictions as determined by EPNG. Town and Contractor shall comply with all precautionary measures required by EPNG to protect the Pipeline and the ROW.
   b. EPNG Standby Expenses. After the initial construction of the Encroachments is completed, in the event Town's Encroachment maintenance or replacement activities around the Pipeline require excessive involvement by EPNG Damage Prevention staff for standby and supervision, in accordance with standard EPNG policy, EPNG reserves the right to charge, and Town agrees to pay the EPNG Damage Prevention staff rates current at that time. For planning and reference purposes only, the rate for the year 2022 is $700.00 per day. EPNG understands that the initial construction of the Encroachments will be completed by Subdivision Developer, D.R. Horton, so during the initial construction EPNG shall charge D.R. Horton rather than Town for any such staff construction standby and supervision fees.
   c. During the construction, maintenance, or replacement of the Encroachments, the Pipeline must be supported if a 17' segment of the Pipeline, or longer, is exposed.
   d. Town shall not reduce the depth of cover on the ROW, or permit such alteration anywhere on, or alter the drainage of the ROW except as shown in the Plans, without EPNG's prior written consent, which EPNG may withhold or condition in its sole discretion. Town shall be solely responsible for, and shall bear the expense of repairs attributable to, in EPNG's sole opinion, any loss of subjacent or lateral support to the ROW and/or EPNG Facilities caused by the Encroachments or other Town activity.
   e. No material, fill, or spoil shall be stored or stockpiled over or upon the Pipeline.
   f. **Drainage Channel and ADA-Compliant Pedestrian Walkway** shall be installed per the cross section attached as Exhibit "A".

g. **Foreign Utilities** shall cross under the Pipeline, perpendicularly and at a constant elevation across the entire ROW, with a minimum of 24" of vertical clearance between the bottom of the Pipeline and the top of the foreign utility.

h. **Landscape Vegetation.** No party shall plant trees, saguaro cacti, or shrubs with a mature height of 5' or greater within the ROW.

i. **Lot Walls.** Walls are not allowed within EPNG's ROW. This means that the western property boundary walls for Lots 39 thru 61 and Lots 394 thru 413, if any, must be built adjacent to the eastern limit of EPNG's ROW.

4. Modifications. The Town agrees that, once constructed, the Encroachments will not be modified or expanded or enlarged without EPNG's prior written consent.

5. Damages to Encroachments. The Town agrees to be solely responsible for any damages that may be caused to the Encroachments by the exercise of EPNG's rights under the Easement. Should EPNG's construction, operation, maintenance, alteration, repair, replacement, removal, addition, or changing the size of any of the EPNG Facilities within the ROW at any time affect, damage, or require the removal of the Encroachments, or any portion thereof, Town agrees to bear all costs to repair or replace the Encroachments, including any costs and expenses associated with the loss of the use of the Encroachments as a result of EPNG's activities. The Town agrees to indemnify and hold the EPNG Indemnitees (defined below) harmless from any and all damages to the Encroachments.

6. Damage to EPNG Facilities. The Town shall be solely responsible for the construction, ownership, operation, maintenance, use, and removal of the Encroachments and for all expenses incurred by EPNG and/or damage to EPNG Facilities and/or the ROW as a result, in EPNG's sole opinion, of the Town's exercise of its rights under this Agreement. The Town shall upon demand by EPNG, reimburse EPNG fully for any such expense or damage.

7. Prior Rights. Town acknowledges that EPNG's Facilities have a prior and superior right within the ROW. Therefore, any and all future conflicts between the Encroachments and the EPNG Facilities, or any authorized expansions thereof, shall be resolved at the Town's sole expense.

8. Relocation of and Alterations to Encroachments. If, in EPNG's opinion, the Encroachments require relocation or alteration in any way, EPNG shall notify the Town of the necessity for such relocation and/or alteration, using reasonable efforts to minimize the distance of said relocation; and Town shall alter or relocate the Encroachments at Town's sole cost and expense, within thirty (30) days of receipt of said notification. In the event of such alteration or relocation, Town agrees to restore the ROW as nearly as practicable to its original condition. If Town fails to comply with any such request of EPNG to alter or relocate the Encroachments, EPNG shall have the right to alter or relocate the Encroachments at Town's sole risk and expense.

9. Town's Indemnification. The Town agree to indemnify and hold harmless EPNG, its parent, affiliates, agents, employees, contractors, and subcontractors and their respective successors and assigns (individually and collectively, the "**EPNG Indemnitees**"), from liabilities, damages, losses and costs caused by Town to the EPNG Facilities, but only to the extent caused by negligence, recklessness or intentional wrongful conduct of Town, their respective parents, affiliates, agents, employees, contractors or subcontractors, or their respective heirs, successors and assigns.

10. EPNG Indemnification. EPNG agrees to indemnify and hold harmless Town, their respective parents, affiliates, agents, employees, contractors, and subcontractors and their respective successors and assigns (individually and collectively, the "**Town Indemnitees**"), from liabilities, damages, losses and costs caused by EPNG to the Town Property, but only to the extent caused by the negligence, recklessness or intentional wrongful conduct of EPNG, its parent, affiliates, agents, employees, contractors or subcontractors, or their respective heirs, successors and assigns.

11. Runs with the Land. The terms and conditions of this Encroachment Agreement shall be binding on the Parties, their heirs, successors, and assigns. Town acknowledges that this Encroachment Agreement will be filed in the Pima County Recorder's Office and will create a permanent record of conditions and stipulations that will attach to and run with the Town Property and the Encroachments.

12. Invalid Provisions. If any part, term, or provision of this Easement Amendment and Encroachment Agreement is, by a court of competent jurisdiction or regulatory authority having jurisdiction over the Town Property, held to be illegal, void or unenforceable, or to be in conflict with the law of the State of Arizona, the validity of the remaining provisions or portion hereof shall not be affected, and the rights and obligations of the Parties shall be construed and enforced as if this Agreement did not contain the particular part, term, or provision held to be invalid.

Except as hereby amended, all terms, conditions, and provisions of the Easement and the Amendment to Easement, are continued in full force and effect.

AGREED TO AND ACCEPTED BY:

Town of Marana, an Arizona
Municipal corporation

By: _____

_____(printed name)

Its: _____

ACKNOWLEDGEMENT

STATE OF ARIZONA)
)
COUNTY OF PIMA)

This instrument was acknowledged before me on the _____ day of _____, 2022, by _____, the _____ for the Town of Marana, who represented him/herself to be a person duly authorized to execute real estate documents on behalf of the Town.

My Commission Expires:

_____

_____
Notary Public in and for
Pima County, State of Arizona

AGREED TO AND ACCEPTED BY:

El Paso Natural Gas Company, L.L.C.
a Delaware limited liability company

By: _____
M. James Pagonis

Its: Attorney in Fact

ACKNOWLEDGEMENT

STATE OF COLORADO)
)
COUNTY OF EL PASO)

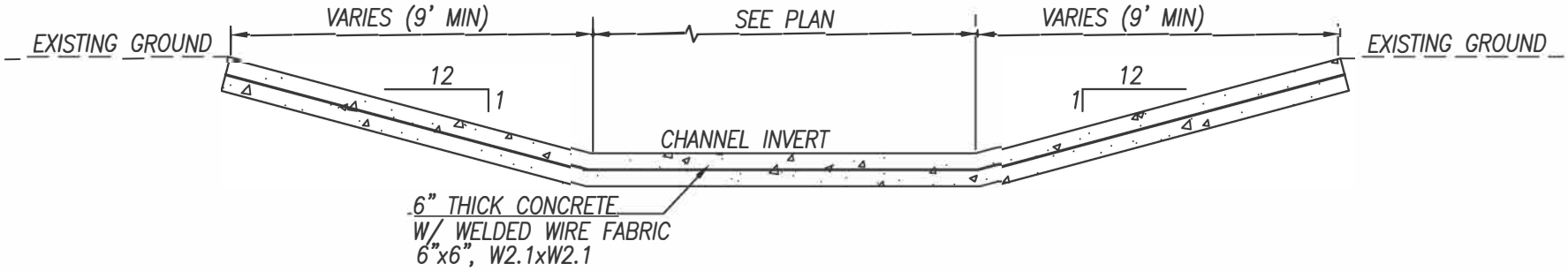
This instrument was acknowledged before me on the _____ day of _____, 2022, by M. James Pagonis, Attorney-In-Fact for El Paso Natural Gas Company, L.L.C., a Delaware limited liability company, who represented himself to be a person duly authorized to execute real estate documents on behalf of El Paso Natural Gas Company, L.L.C.

My Commission Expires:

_____

_____
Notary Public in and for
El Paso County, State of Colorado

Exhibit "A"



PEDESTRIAN CROSSING X-SECTION

NTS

Council-Regular Meeting **A4**

Meeting Date: 08/03/2022

To: Mayor and Council

From: Jane Fairall, Town Attorney

Date: August 3, 2022

Strategic Plan Focus Area:
Not Applicable

Subject: Resolution No. 2022-078: Relating to Development; approving and authorizing the Mayor to execute the First Amendment to Rancho Marana Development Agreement between the Town of Marana and Meritage Homes of Arizona, Inc. (Jane Fairall)

Discussion:

Monterey Homes Construction, Inc. (now Meritage Homes Construction, Inc.) and the Town of Marana entered into a development agreement (DA) dated August 20, 2004 to facilitate development of the Rancho Marana 154 subdivision, generally located between Moore and Barnett Roads, west of Sandario Road. Rancho Marana 154 has been subdivided into 7 blocks. Meritage has developed blocks 1 and 2 as medium density residential use, and intends to develop blocks 3 and 4 for medium density residential use. Blocks 5 through 7 were sold for future commercial uses and a portion of block 7 has been developed. This proposed DA amendment applies to the portion of the subdivision still owned by Meritage, which are blocks 3 and 4. The proposed first amendment to the DA addresses several issues due to various changed circumstances since 2004.

Reimbursement for Transportation Improvements

Pursuant to the terms of the original DA, Meritage is obligated to construct Tangerine Farms Road from Moore Road north to Barnett Road, and Clark Farms Boulevard from Sandario Road to the western boundary of the project. Meritage has constructed the first phase of Tangerine Farms Road, from Moore Road north to Clark Farms Boulevard, but has not yet constructed the second phase from Clark Farms Boulevard

north to Barnett Road. Clark Farms Boulevard within Rancho Marana has been completed as required by the Original Agreement.

Based on Rancho Marana's regional transportation obligations, the development received full credit against the Northwest Streets Development Impact Fee pursuant to state law (A.R.S. §9-463.05). The full impact fee credit for the subdivision, however, is not expected to fully reimburse the developer for its costs related to the regional transportation improvements. Under the terms of the proposed DA amendment, the Town will reimburse Meritage with construction sales tax reimbursement from construction occurring in Rancho Marana, if and only to the extent that the total amount of impact fee credits for the subdivision does not fully reimburse Meritage for its reimbursable costs. The Town's reimbursement obligation in any case will not exceed the amount of actual construction sales tax revenues generated by the subdivision after the effective date of the amendment.

Tangerine Farms Sewer Improvements
As part of the Tangerine Farms Road project from Clark Farms Road to Barnett Road, the developer will construct sewer improvements within the right-of-way. The sewer improvements in question are included in the Town's draft Infrastructure Improvements Plan (IIP) which is the subject of a public hearing on tonight's agenda. If the Tangerine Farms Sewer Improvements are included in the eventually adopted IIP, then the developer will be reimbursed for those improvements through credits against the Wastewater Facilities Development Impact Fee as set forth in the proposed DA amendment and as required by state law.

Offsite Recreation Improvements
The original DA obligates the developer to construct certain Off-Site Recreation Improvements along the east and west sides of Tangerine Farms Road, a landscaped median strip, and landscaping in, on and around the Barnett Road Channel, and a regional trail located within the Barnett Road Channel (i.e. the "Barnett Linear Park"). As the Town's plans for the development of the Barnett Road Channel have significantly changed since 2004, and the Town no longer intends to develop the Barnett Linear Park as originally conceived, the developer submitted a revised landscape plan for Rancho Marana. The proposed DA amendment provides that that developer must construct the landscaping elements of the new landscape plan. Under the proposed DA amendment, the developer will not be required to construct the landscaping and trail improvements formerly planned for the Barnett Linear Park, but the developer will be required to grade the channel to its final dimensions, install drywells or other devices to allow the channel to function as a basin, and install materials for stabilization.

Barnett Road Connection
The Town previously had a CIP project to build a crossing structure at Tangerine Farms Road and the Barnett Road Channel. While the developer is not obligated by any agreement to construct a bridge, a crossing structure, or drainage structures in connection with the Barnett Road Channel, the Town and the developer agreed that to take advantage of economies of scale and to avoid rework of the Tangerine Farms Road improvements, it made sense for the developer to construct the crossing.

Pursuant to the proposed DA amendment, in connection with the developer's construction of Tangerine Farms Road from Clark Farms to Barnett, the developer has designed and will construct a culvert bridge crossing over the Barnett Channel (the "Barnett Culvert Bridge") subject to reimbursement by the Town for all costs and expenses. Currently, not including design costs, the Barnett Culvert Bridge Costs are estimated to be $839,737.35.

Extension of Term
The original agreement had a term of 20 years from August 20, 2004. The proposed DA amendment will extend the term for 15 years from the effective date of this proposed amendment.

Financial Impact:
Budget capacity of $698,600 has been included in the FY 2022-2023 adopted budget for the Barnett Road Connection.

The original agreement obligates the developer to construct certain improvements a number of which have already been completed, while being entitled to certain impact fee credits. As per the agreement presented tonight, the developer will continue to receive applicable impact fee credits for the construction of projects included in the agreement.

For some improvements, additional reimbursement may be provided by construction sales tax revenues in addition to impact fee credits, up to an amount not to exceed the amount of eligible reimbursable costs. The agreement acknowledges that construction sales tax revenues may be insufficient to pay all improvement costs.

Actual total costs and impact fee credits and other reimbursements for all improvements (including the Barnett Road Connection) will depend on the timing of construction of the different improvements included in the agreement. Staff will work with the developer to include adequate budget capacity in future budget years.

Staff Recommendation:
Staff recommends approval of the First Amendment to Rancho Marana Development Agreement.

Suggested Motion:
I move to adopt Resolution No. 2022-078, approving and authorizing the Mayor to execute the First Amendment to Rancho Marana Development Agreement between the Town of Marana and Meritage Homes of Arizona, Inc.

Attachments

Resolution No. 2022-078
Exhibit A - Rancho Marana DA 1st Amendment

MARANA RESOLUTION NO. 2022-078

RELATING TO DEVELOPMENT; APPROVING AND AUTHORIZING THE MAYOR TO EXECUTE THE FIRST AMENDMENT TO RANCHO MARANA DEVELOPMENT AGREEMENT BETWEEN THE TOWN OF MARANA AND MERITAGE HOMES OF ARIZONA, INC.

WHEREAS, on February 6, 1990, the Town Council adopted Marana Ordinance No. 90.04, creating the Rancho Marana Specific Plan; and

WHEREAS Meritage Homes of Arizona, Inc. (the "Developer") is the current master developer of the Rancho Marana 154 development project, as described and defined in the final plat for Rancho Marana 154 Lots 1-167 and Blocks 2-7 recorded in the office of the Pima County Recorder on December 8, 2004 in Book 59 of Maps and Plats, Page 13 (Sequence No. 20042360739); and

WHEREAS the Town and the Developer's predecessor in interest entered into the Rancho Marana Development Agreement recorded in the office of the Pima County Recorder on September 8, 2005 at Docket 12634, Page 1496 (Sequence No. 20051750556) (the "Original Agreement"); and

WHEREAS the Town and the Developer have negotiated an amendment to the Original Agreement to address various changed circumstances related to the development; and

WHEREAS the Mayor and Council find that entering into the First Amendment to the Rancho Marana Development Agreement is in the best interest of the Town.

NOW, THEREFORE, BE IT RESOLVED BY THE MAYOR AND COUNCIL OF THE TOWN OF MARANA, ARIZONA, that the First Amendment to the Rancho Marana Development Agreement between the Town of Marana and the Developer attached to and incorporated by this reference in this resolution as Exhibit A is hereby approved, the Mayor is hereby authorized and directed to sign it for and on behalf of the Town of Marana, and the Town's Manager and staff are hereby directed and authorized to undertake all other and further tasks required or beneficial to carry out its terms, obligations, and objectives.

PASSED AND ADOPTED by the Mayor and Council of the Town of Marana, Arizona, this 3rd day of August, 2022.

Mayor Ed Honea

ATTEST:

Cherry L. Lawson, Town Clerk

APPROVED AS TO FORM:

Jane Fairall, Town Attorney

FIRST AMENDMENT TO RANCHO MARANA DEVELOPMENT AGREEMENT

TOWN OF MARANA, ARIZONA

This First Amendment to Rancho Marana Development Agreement (this "Amendment") is entered into by and between the TOWN OF MARANA, an Arizona municipal corporation (the "Town") and MERITAGE HOMES OF ARIZONA, INC., an Arizona corporation formerly known as Monterey Homes of Arizona, Inc. (the "Developer"), as successor in interest to Monterey Homes Construction, Inc. and Stewart Title and Trust of Tucson. The Town and the Developer are collectively referred to in this Amendment as the "Parties," each of which is sometimes individually referred to as a "Party."

RECITALS

A. Monterey Homes Construction, Inc. (now Meritage Homes Construction, Inc.) and Stewart Title and Trust of Tucson (collectively the "Original Owners") and the Town entered into a Development Agreement dated August 20, 2004 and recorded in the office of the Pima County Recorder on September 8, 2005 at Docket 12634, Page 1496 (Sequence No. 20051750556) (the "Original Agreement")[1] to facilitate development of the Rancho Marana 154 project on the property described and depicted on Exhibit A to the Original Agreement (the "Project" or the "Rancho Marana Project").

B. The Original Owners subsequently transferred ownership of the property that is the subject of the Rancho Marana Project to the Developer.

C. The property that is the subject of the Project has been subdivided as follows:

i) The Final Plat for Rancho Marana 154 Lots 1-167 and Blocks 2-7 was recorded in the office of the Pima County Recorder on December 8, 2004 in Book 59 of Maps and Plats, Page 13 (Sequence No. 20042360739).

ii) The Final Plat for Rancho Marana 154 Block 2, Lots 1-140 and Common Areas "A" through "N" was recorded in the office of the Pima County Recorder on September 8, 2006 in Book 61 of Maps and Plats, Page 65 (Sequence No. 20061740621).

iii) The Final Plat for Rancho Marana 154 Block 4, Lots 1-81 and Common Areas "A" through "M" was recorded in the office of the Pima County Recorder on February 12, 2007 in Book 62 of Maps and Plats, Page 26 (Sequence No. 20070290500).

[1] The Original Agreement was first recorded on August 20, 2004 at Docket 12370, Page 2849 (Sequence No. 20041620637) without its Exhibits A, B, and C included. It was re-recorded with the Exhibits on the date noted in Recital A.

iv) The Final Plat for Rancho Marana 154 Block 3, Lots 1-128 and Common Areas "A" through "N" was recorded in the office of the Pima County Recorder on May 10, 2019 at Sequence No. 20191300072.

D. The Developer has developed Blocks 1 and 2 as medium density residential use, and intends to develop Blocks 3 and 4 for medium density residential use.

E. The Developer has sold Blocks 5 through 7. A portion of Block 7 has been developed for commercial use; the remaining portion of Block 7 and Blocks 5 and 6 are intended to be developed for future commercial uses.

F. The property that is the subject of this Amendment is the property within the Rancho Marana Project that is still owned by the Developer, specifically, Block 3 of Rancho Marana as described in the final plat described in recital C (iv) above, and Block 4 of Rancho Marana as described in the final plat described in recital C (iii) above (the "Property").

G. Pursuant to the terms of the Original Agreement, the Developer is obligated to provide certain Regional Public Infrastructure, as defined in paragraph 2.1 of the Original Agreement, to serve the planned development of the Project and also to facilitate and support the ultimate development of the larger land area that includes the Project.

H. As a part of the Developer's Regional Public Infrastructure obligations, the Developer is obligated to construct certain Transportation Improvements, as defined in paragraph 2.3 of the Original Agreement, including, without limitation, construction of Tangerine Farms Road from Moore Road north to Barnett Road, and construction of Clark Farms Boulevard from Sandario Road to the western boundary of the Project (the "Tangerine Farms and Clark Farms Improvements").

I. Tangerine Farms Road from Moore Road north to Barnett Road, and Clark Farms Boulevard from Sandario Road to the western boundary of the Project are both included within the Town's Streets Facilities Infrastructure Improvements Plan, as adopted by the Town Council, most recently pursuant to Resolution No. 2017-090.

J. The Developer has constructed the first phase of Tangerine Farms Road, from Moore Road north to Clark Farms Boulevard, but has not yet constructed the second phase from Clark Farms Boulevard north to Barnett Road (the "Tangerine Farms Road Phase 2 Improvements"). The Developer has completed construction of Clark Farms Boulevard as required by the Original Agreement. The Tangerine Farms Road Phase 2 Improvements shall include completion of the landscaping elements and improvements required for Tangerine Farms Road as set forth in the approved Revised Landscape Plans (as defined in subparagraph 3(f) below).

K. The Original Agreement obligates the Developer to complete the Tangerine Farms Road Phase 2 Improvements prior to the release of the assurances posted to assure completion of the improvements set forth on the Rancho Marana Final Block Plat for each Block.

L. The Original Agreement acknowledged that if the Town adopted an impact fee for the same infrastructure for which the Developer had contributed land or made improvements, the Developer shall be entitled to a credit for its contributions as set forth in A.R.S. §9-463.05.

M. On April 5, 2005, the Town Council adopted Ordinance No. 2005.12, establishing the Northwest Streets Development Impact Fee (the "NW Streets DIF"). The Project is located in the NW Streets DIF Benefit Area as established by Ordinance No. 2005.12, and as amended from time to time.

N. On July 19, 2005, via adoption of Resolution No. 2005-88, the Town Council approved a Development Agreement regarding Development Impact Fee Credits for Rancho Marana 154 (the "DIF DA") to memorialize the amount of development impact fee credits due to the Developer for its infrastructure obligations. Pursuant to A.R.S. §9-463.05 and the DIF DA, the Developer was entitled to full credit against the NW Streets DIF. The DIF DA was executed by the Town, but does not appear to have ever been executed by the Developer. Nonetheless, the Town has credited the Developer as required by A.R.S. §9-463.05 and the Original Agreement.

O. The Original Agreement also obligates the Developer to construct certain Off-Site Recreation Improvements (as defined in paragraph 2.4.2 of the Original Agreement), including the shoulder, a 100-foot buffer with landscaping, a trail and drainage facilities along the east side of Tangerine Farms Road, and the shoulder and landscape buffer along the west side of Tangerine Farms Road, and a landscaped median strip (the "Tangerine Buffer Improvements" as defined in paragraph 2.3.1.1 of the Original Agreement), and landscaping in, on and around the Barnett Road Channel, and a regional trail located within the Barnett Road Channel (the "Barnett Linear Park" as defined in paragraph 2.4 of the Original Agreement).

P. The Town's plans for the development of the Barnett Road Channel have significantly changed since 2004, the Town no longer intends to develop the Barnett Linear Park as originally conceived.

Q. The Tangerine Farms Sewer Improvements (as defined in subparagraph 3(i) below) are included in the Town of Marana's proposed Sewer Infrastructure Improvements Plan, supporting development impact fees, which is proposed to be forwarded to the Town Council for consideration of adoption within the next year.

R. The Developer is the sole beneficiary of TITLE SECURITY AGENCY LLC, a Delaware limited liability company, formerly known as Title Security Agency of Arizona, LLC, a Delaware limited liability company, as Trustee under Trust 201812T and not otherwise, which is the title owner of the Developer's remaining land holdings within the Rancho Marana Project, and to the extent the trust's interests are implicated, is signing this Amendment in its capacity as sole beneficiary of the trust.

S. The Town is authorized by A.R.S. § 9-500.05 to enter into a development agreement with a landowner or other person or entity having an interest in real property located

within the Town to facilitate development of the property by providing for, among other things, the conditions, terms, restrictions, and requirements for development and public infrastructure and the financing of public infrastructure.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual promises made in this Amendment, the Parties hereby agree as follows:

1. *Incorporation of the recitals*. The foregoing Recitals are incorporated here by this reference.

2. *Effect*. Capitalized words and phrases in this Amendment shall have the meanings set forth in the Original Agreement as modified by this Amendment, and the terms of the Original Agreement shall continue in full force and effect except as expressly modified by this Amendment.

3. *Additional definitions*. The following additional definitions shall apply to this Amendment:

a. "Construction Sales Tax Revenues" means three-quarters (75%) of the Town's transaction privilege taxes (currently 4%) generated pursuant to Section 8-415 or 8-416 of the Marana Tax Code (or corresponding sections of successor codes) from construction contracting or speculative builder activities on the Property after the Effective Date of this Amendment.

b. "Northwest Streets Development Impact Fee" or "NW Streets DIF" is defined in recital M above.

c. "Reimbursable Costs" means all costs, expenses, fees, transaction privilege taxes and charges actually incurred and paid by or on behalf of the Developer to contractors, architects, engineers, surveyors, governmental agencies, other professionals and consultants, and other third parties for materials, labor, planning, design, engineering, surveying, site excavation and preparation, governmental permits and payments, payment and performance bonds, other professional services, and all other costs and expenses related or incidental to and reasonably necessary for, the acquisition, improvement, construction, installation, or provision of the Tangerine Farms and Clark Farms Improvements and the Tangerine Farms Sewer Improvements and warranting them for one year after completion. Reimbursable Costs shall not include and shall not accrue interest.

d. "Reimbursement Account" means either a separate account within the Town's General Fund or a separate book or ledger entry designation for the purpose of making Reimbursement Payments.

e. "Reimbursement Payments" is defined in paragraph 9 below.

f. "Revised Landscape Plans" means (a) the Landscape Plan for Rancho Marana 154 Block 3, having plan number LPR1811-003, approved by the Town on April 19,

2022, and (b) the Landscape Plan for Rancho Marana 154 Block 4, having plan number LPR0607-003, approved by the Town on October 19, 2021, as they may be amended and accepted by the Town.

g. The "Tangerine Farms and Clark Farms Improvements" means those improvements described in recital H above.

h. The "Tangerine Farms Road Phase 2 Improvements" means those improvements described in recital J above.

i. The "Tangerine Farms Sewer Improvements" means sewer improvements within the Tangerine Farms Road right-of-way, including 767 linear feet of 24" sewer pipe, two new manholes, and other necessary items considered incidental to sewer installation as designed and detailed on sheets 8 and 9 on the Town of Marana improvement plan titled Rancho Marana 154, Block 4 Improvement Plans Lots 1 Thru 81 and Common Areas "A" Thru "M", having plan number ENG1704-006, approved by the Town on May 26, 2021.

j. "Unrecovered Transportation Improvement Costs" is defined in paragraph 4(d) below.

k. "Wastewater Facilities Development Impact Fee" is the fee adopted by the Town pursuant to Section 3 of Marana Ordinance No. 2014.013 and amended by Section 9 of Marana Ordinance No. 2017.029.

4. *Overview of costs, credits, and reimbursements for the Tangerine Farms and Clark Farms Improvements*

a. As verified by the Town Engineer, the Developer has spent $1,827,998.00 in Reimbursable Costs (as defined in subparagraph 3(c) above) for the construction of Clark Farms Boulevard and the first phase of Tangerine Farms Road. Based on engineer's estimates as verified by the Town Engineer, the cost of construction of Tangerine Farms Road Phase 2 Improvements is estimated to be approximately $1,553,519.00, for a total cost to the Developer of approximately $3,381,517.00 for construction of the Tangerine Farms and Clark Farms Improvements.

b. As of date of this Amendment, the Project has received $1,893,678.00 in NW Streets DIF credits as follows: $1,838,676 for Blocks 1 and 2 and $55,002.00 for the portion of Block 7 that has been developed.

c. The Developer will continue to receive applicable credits against the NW Streets DIF (as it may be amended from time to time) for Blocks 3 and 4. The developer/owner of Blocks 5 through 7 will also receive applicable credits against the NW Streets DIF. As of the date of this Amendment, the NW Streets DIF is $3,719.00 per EDU as adopted by Marana Ordinance No. 2017.029.

d. If and only to the extent the total amount of NW Streets DIF credits applied to the Project do not reimburse the Developer for the Reimbursable Costs for the Tangerine Farms and Clark Farms Improvements, the Developer will be reimbursed for the

difference (the "Unrecovered Transportation Improvement Costs") through reimbursement of the Construction Sales Tax Revenues generated on the Property after the Effective Date of this Amendment ("Construction Sales Tax Reimbursements"), as described in paragraph 8 below.

e. The Parties acknowledge that if there is an increase in the NW Streets DIF that applies to the Property, the Developer will be credited for that increased amount which will result in a corresponding reduction in the amount of Construction Sales Tax Reimbursements to the Developer.

5. *Developer reimbursement for Tangerine Farms Sewer Improvements*. If the Developer constructs the Tangerine Farms Sewer Improvements, and if the Tangerine Farms Sewer Improvements are included in the Wastewater Facilities Development Impact Fee via adoption of the proposed Sewer Infrastructure Improvements Plan (described in recital Q above), then the Developer will be reimbursed only through reimbursement of the Wastewater Facilities Development Impact Fee, payable for construction occurring on the Property, in accordance with paragraph 9 below. The full amount of the Wastewater Facilities Development Impact Fees will be charged to the Property and placed in the Reimbursement Account (see subparagraph 9(a) below). Once the Developer has been fully reimbursed for the Reimbursable Costs of constructing the Tangerine Farms Sewer Improvements, the full Wastewater Facilities Development Impact Fee will be due and payable for construction occurring on the Property with no reimbursement to the Developer.

6. *Development impact fees*. Nothing in this Amendment shall be construed as a waiver or reduction of development impact fees properly adopted by the Town pursuant to A.R.S. § 9-463.05 and applicable to the Project.

7. *Town review and approval of plans*. The plans and specifications for a portion of the Tangerine Farms Road Phase 2 Improvements (from Clark Farms Boulevard to Charismatic Drive), known as Rancho Marana 154, Block 4 Improvement Plans, having plan number ENG1704-006, were approved by the Town on May 26, 2021. The plans and specifications for the remainder of the Tangerine Farms Road Phase 2 Improvements (from Charismatic Drive to Barnett Road), known as Rancho Marana 154, Block 4 Conarch and Paving Plan, having plan number ENG2110-006, were approved by the Town on March 24, 2022. The plans and specifications for the Tangerine Farms Sewer Improvements were approved as described in subparagraph 3(i) above. The Revised Landscape Plans were approved as described in subparagraph 3(f) above. The Tangerine Farms Road Phase 2 Improvements, the Tangerine Farms Sewer Improvements, and the landscaping elements and improvements required by the Revised Landscape Plans are subject to the Town's normal construction inspection requirements.

8. *Developer Reimbursement for Unrecovered Transportation Improvement Costs from Construction Sales Tax Revenues.* If and to the extent the Developer constructs the Tangerine Farms Road Phase 2 Improvements, the Unrecovered Transportation Improvement Costs, if any, will be reimbursed to the Developer through reimbursement of the Construction Sales Tax Revenues as described in this paragraph 8 until the combined total

amount of the NW Streets DIF credits and Construction Sales Tax Reimbursements to the Developer equals the Reimbursable Costs for the Tangerine Farms and Clark Farms Improvements, except that the Town's reimbursement obligation shall not exceed the amount of actual Construction Sales Tax Revenues generated by the Property after the Effective Date of this Amendment.

a. *Tangerine Farms Road Phase 2 Improvements construction and reimbursement*. In satisfaction of the Developer's Tangerine Farms Road Phase 2 Improvements obligations under the Original Agreement and as a condition precedent to receiving Reimbursement Payments under paragraph 9 of this Amendment, the Developer shall, as required by paragraph 2.3.1 of the Original Agreement:

i. Design and construct the Tangerine Farms Road Phase 2 Improvements; and

ii. Pay all Reimbursable Costs for the Tangerine Farms Road Phase 2 Improvements as they become due.

b. Developer cost statements and Town reimbursement for Unrecovered Transportation Improvement Costs. The Town shall make Reimbursement Payments to the Developer for the Unrecovered Transportation Improvement Costs pursuant to paragraph 9 below. The Developer shall submit to the Town quarterly statements showing the actual Tangerine Farms Road Phase 2 Improvements costs incurred and paid to date. The Developer shall provide the Town with invoices or other backup information reasonably requested by the Town to confirm the accuracy of the Developer's quarterly statements of costs.

c. *Effect of loss of construction sales tax revenues*. If the laws of the State of Arizona are revised in a way that reduces or eliminates Construction Sales Tax Revenues, the Town shall make deposits into the Reimbursement Account from such funding, if any, that the Town receives under then-existing laws of the State of Arizona to replace the reduced or eliminated Construction Sales Tax Revenues, in an amount that is proportional, in the Town Finance Director's reasonable opinion, to the Construction Sales Tax Revenues that the Town would have received if the laws of the State of Arizona had not been so revised.

d. *No Town representation of sufficiency of Reimbursement Payments*. The Developer acknowledges and understands that the amount of the Construction Sales Tax Revenues depends on many factors and may be insufficient to pay all of the Unrecovered Transportation Improvement Costs.

e. *Developer's audit*. Not more than once each calendar year, the Developer may, at its own cost, audit Town sales tax returns and other appropriate financial records of the Town to assure prompt and accurate deposit into the Reimbursement Account of all revenues as required pursuant to this Amendment. The Developer's audit authorized by this paragraph shall be subject to all applicable laws that may prohibit or limit the dissemination or use of transaction privilege tax and related information. Before the Developer's audit occurs, the Developer shall obtain and provide to the Town

written waivers of confidentiality sufficient to satisfy the requirements of Arizona Revised Statutes § 42-2003(A)(6) from each taxpayer whose sales tax returns and other financial records are provided by the Town in connection with the audit.

f. *Limitations*. During the Term of this Amendment, the Town shall not enter into any agreement or transaction which impairs the rights of the Developer under this Amendment, including, without limitation, the right to receive the Reimbursement Payments and the proceeds of the Reimbursement Account in accordance with the procedures established in this Amendment.

g. *Contractor and subcontractor disaggregation of tax information for the Property; release of tax information*. The information provided to the Town by the Arizona Department of Revenue does not contain the level of detail required for the Town to be able to identify the construction sales tax revenues generated for any specific project. The Developer shall require each contractor and subcontractor responsible for the payment of Construction Sales Tax Revenues to separately report construction sales tax attributable to construction on the Property. The Developer shall exercise reasonable efforts to obtain from each contractor and subcontractor doing work attributable to the Property a consent to release of tax information in a form reasonably acceptable to the Town. If the separate report required by this paragraph is not provided to the Town, the Town shall make a reasonable estimate of Construction Sales Tax Revenues based on all information available to the Town, including information provided by the Developer, and the good faith certification by the Town's Finance Director shall be considered final and binding upon the Developer. The final certification of the Town's Finance Director shall be subject to all applicable laws that may prohibit or limit the dissemination or use of transaction privilege tax and related information.

9. *Reimbursements*. All reimbursements under this Amendment shall be paid to the Developer as provided in this paragraph.

a. *Reimbursement Account*. The town shall deposit into the Reimbursement Account the following:

i. As they are received from the Arizona Department of Revenue, the Construction Sales Tax Revenues beginning with the first such revenues generated from the Property after the Effective Date of this Amendment and ending upon the earlier of the following:

(a) The expiration of the Term of the Original Agreement (as extended by this Amendment).

(b) When construction contracting and speculative builder activities, as defined in Section 8-415 and 8-416 of the Marana Tax Code, on the Property cease and all Construction Sales Tax Revenues generated from the Property have been deposited into the Reimbursement Account.

(c) When the Town has reimbursed the Developer for the full amount of the Unrecovered Transportation Improvement Costs.

ii. Any Wastewater Facilities Development Impact Fees paid for development on the Property that are reimbursable to the Developer (see paragraph 5 above).

b. *Reimbursement Payments*. The Town shall pay to the Developer within the first 45 days of each calendar quarter all funds in the Reimbursement Account ("Reimbursement Payments"), beginning the first calendar quarter after:

i. The Town has determined, after calculating the total amount of NW Streets DIF credits applied to the Project and determining the Developer's total Transportation Improvement Costs, that the Developer has incurred Unrecovered Transportation Improvement Costs; and

ii. The Developer satisfies all conditions precedent to receiving Reimbursement Payments as set forth in this Amendment; and

iii. The Town has accepted the Tangerine Farms Road Phase 2 Improvements and the Tangerine Farms Sewer Improvements for maintenance; and

iv. The Town has funds in the Reimbursement Account.

Any funds accrued in the Reimbursement Account and due to the Developer pursuant to the terms of this Amendment, but not yet disbursed to the Developer upon the expiration of the Term of the Original Agreement (as extended by this Amendment), shall be paid to Developer within 120 days after the expiration of the Term of the Original Agreement (as extended by this Amendment).

10. *Off-Site Recreation Improvements*. In lieu of the required landscaping elements of the Tangerine Buffer Improvements, as described in paragraph 2.3.1.1 of the Original Agreement, the required landscaping elements of the Barnett Linear Park and Barnett Road Channel improvements, as described in paragraph 2.4 of the Original Agreement, and the required landscaping elements of the Improvement Plans submitted by the Developer, as described in recital E of the Original Agreement, the Developer shall complete all landscaping elements and improvements required by the Revised Landscape Plans. Upon completion of the landscaping elements and improvements as required by the approved Revised Landscape Plans, and the Town's acceptance of the elements and improvements, the Developer's obligation to construct the Off-Site Recreation Improvements described in paragraph 2.4 of the Original Agreement shall be deemed to be completed and satisfied, except as provided in paragraph 12 below.

11. *Barnett Road Channel materials*. Paragraph 2.3.4 of the Original Agreement provides that the Developer shall excavate the Barnett Road Channel where it runs along the northern boundary of the Project and that the Developer shall be permitted to use the excavated material. Excavation of the Barnett Road Channel occurred several years ago and the excavated material has been used by other parties. The Town has other excavated material available at the Marana Water Reclamation Facility (the "MWRF") located at 14393 North Luckett Road. The Parties agree that the Developer is permitted to retrieve excavated material from the MWRF, at the Developer's own cost, as needed for the Developer's use on the Property. The Town makes no representation as to the amount of

excavated material available at the MWRF. Moreover, the excavated material is not for the exclusive use of the Developer and may be used by other parties.

12. *Barnett Linear Park*. The Town's plans for the development of the Barnett Road Channel have significantly changed since 2004, and the Town no longer intends to develop the Barnett Linear Park as originally conceived. Accordingly, the Developer shall not be required to construct the landscaping and trail improvements described in Section 2.4.2.1 of the Original Agreement. The Developer shall grade the channel to its final dimensions, install drywells or other devices to allow the channel to function as a basin, and install materials for stabilization. Notwithstanding anything to the contrary in the Original Agreement, the defined terms "Recreation Improvements" and "Off-Site Recreation Improvements" shall not include the landscaping and trail improvements described in Section 2.4.2.1 of the Original Agreement regarding the Barnett Linear Park.

13. *Barnett Road Connection*. The Parties acknowledge and agree that pursuant to paragraph 2.3.1.1 of the Original Agreement, the Developer is obligated to construct Tangerine Farms Road from Moore Road to Barnett Road. The Parties further acknowledge and agree that pursuant to paragraph 2.3.4 of the Original Agreement, the Developer is not obligated to construct a bridge, a crossing structure, or drainage structures in connection with the Barnett Road Channel, and that any such crossing is the Town's obligation. To take advantage of economies of scale and to avoid rework of the Tangerine Farms Road Phase 2 Improvements, in connection with the Developer's construction of the Tangerine Farms Road Phase 2 Improvements, the Developer shall design and construct a culvert bridge crossing over the Barnett Channel (the "Barnett Culvert Bridge") subject to reimbursement by the Town for all costs and expenses for the design, construction, and installation of the Barnett Culvert Bridge (the "Barnett Culvert Bridge Costs"). The Town will reimburse the Developer for any Barnett Culvert Bridge Costs within 30 days following the Developer's submission to the Town of an invoice for the Barnett Culvert Bridge Costs along with supporting documentation and other backup information reasonably requested by the Town to confirm such Barnett Culvert Bridge Costs, which invoices shall not be submitted more often than monthly. Currently, not including design costs, the Barnett Culvert Bridge Costs are estimated to be $839,737.35; provided that such estimate will be increased by any change orders approved by the Town, the addition of design costs, and any other unforeseen cost increases incurred as part of the Barnett Culvert Bridge Costs. The plans and specifications for the Barnett Culvert Bridge, known as Rancho Marana 154, Block 4 Conarch and Paving Plan, having plan number ENG2110-006, were approved by the Town on March 24, 2022.

14. *Extension of Term*. This Amendment shall become effective upon its execution by all the Parties and the effective date of the resolution or action of the Town Council approving this Amendment (the "Effective Date"). Pursuant to paragraph 6.1 of the Original Agreement, the Parties hereby agree to extend the Term of the Original Agreement such that, unless sooner terminated by the mutual consent of the Parties, the Term shall automatically terminate and shall thereafter be void for all purposes on the 15th anniversary of the Effective Date of this Amendment. The Town's reimbursement obligations

under paragraph 9 above shall terminate when the Town has reimbursed the Developer the Unrecovered Transportation Improvement Costs as defined in subparagraph 4(d) above and subject to the limitations of paragraph 8 above, or on the 15th anniversary of the Effective Date, whichever occurs first. If the Parties determine that a longer period is necessary for any reason, the term of the Original Agreement or this Amendment may be extended by written agreement of the Parties.

15. *Counterparts*. This Amendment may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument. The signature pages from one or more counterparts may be removed from such counterparts and such signature pages all attached to a single instrument so that the signatures of all Parties may be physically attached to a single document.

16. *Good standing; authority*. The Developer represents and warrants to the Town that it is duly formed and validly existing under the laws of Arizona and is authorized to do business in the state of Arizona. The Town represents and warrants to the Developer that it is an Arizona municipal corporation with authority to enter into this Amendment under applicable state laws. Each Party represents and warrants that the individual executing this Amendment on its behalf is authorized and empowered to bind the Party on whose behalf each such individual is signing.

17. *Severability*. If any provision of this Amendment is declared void or unenforceable, it shall be severed from the remainder of this Amendment, which shall otherwise remain in full force and effect. If a law or court order prohibits or excuses the Town from undertaking any contractual commitment to perform any act under this Amendment, this Amendment shall remain in full force and effect, but the provision requiring the act shall be deemed to permit the Town to act at its discretion, and if the Town fails to act, the Developer shall be entitled to terminate this Amendment.

18. *Governing law*. This Amendment is entered into in Arizona and shall be construed and interpreted under the laws of Arizona, and the Parties agree that any litigation or arbitration shall take place in Pima County, Arizona. Nothing in the use of the word "litigation" in the preceding sentence shall constitute a waiver of paragraph 3.5 of the Original Agreement, requiring disputes to be resolved by binding arbitration.

19. *Interpretation*. This Amendment has been negotiated by the Town and the Developer, and no party shall be deemed to have drafted this Amendment for purposes of construing any portion of this Amendment for or against any party.

20. *Recordation*. The Town shall record this Amendment in its entirety in the office of the Pima County Recorder no later than ten days after it has been executed by the Town and the Developer.

21. *No representations of development*. Except as specifically set forth in this Amendment, nothing contained in this Amendment shall be deemed to obligate the Town or the Developer to complete any part or all of the development of Rancho Marana.

22. *Approval*. If any Party is required pursuant to this Amendment to give its prior written approval, consent or permission, such approval, consent or permission shall not be unreasonably withheld or delayed.

23. *Force majeure*. If any Party shall be unable to observe or perform any covenant or condition of this Amendment by reason of "force majeure," then the failure to observe or perform such covenant or condition shall not constitute a default under this Amendment so long as such Party shall use its best effort to remedy with all reasonable dispatch the event or condition causing such inability and such event or condition can be cured within a reasonable amount of time. "Force majeure," as used in this paragraph, means any condition or event not reasonably within the control of such party, including without limitation, "acts of God," strikes, lock-outs, or other disturbances of employer/employee relations; acts of public enemies; orders or restraints of any kind of government of the United States or any state thereof or any of their departments, agencies, or officials, or of any civil or military authority; insurrection; civil disturbances; riots; epidemics; landslides; lightning; earthquakes; subsidence; fires; hurricanes; storms; droughts; floods; arrests, restraints of government and of people; explosions; and partial or entire failure of utilities. Failure to settle strikes, lock-outs and other disturbances of employer/employee relations or to settle legal or administrative proceedings by acceding to the demands of the opposing Party or Parties, in either case when such course is in the judgment of and unfavorable to a Party shall not constitute failure to use its best efforts to remedy such a condition.

24. *Conflict of interest*. This Amendment is subject to A.R.S. § 38-511, which provides for cancellation of contracts in certain instances involving conflicts of interest.

25. *Notices and filings*. All notices, filings, consents, approvals and other communications provided for in or given in connection with this Amendment shall be validly given, filed, made, transmitted or served if in writing and delivered personally, sent via overnight national courier, or sent by registered or certified United States mail, postage prepaid, if to (or to such other addresses as any Party may from time to time designate in writing and deliver in a like manner):

To the Town:
TOWN OF MARANA
Attn: Town Manager
Marana Municipal Complex
11555 West Civic Center Drive, A3
Marana, Arizona 85653

With a copy to:
Town Attorney
Marana Municipal Complex
11555 West Civic Center Drive, A3
Marana, Arizona 85653

To Owner/Developer: MERITAGE HOMES OF ARIZONA, INC.
Attn: Scott Kolt and Ryan Hamilton
5326 N. La Cholla Blvd.
Tucson, Arizona 85741

With a copy to: Meritage Homes Corporation
Attn: Curtis Keller
8800 E. Raintree Dr., Suite 300
Scottsdale, Arizona 85260

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the Parties have executed this Amendment as of the last date set forth below their representatives' respective signatures.

TOWN:

THE TOWN OF MARANA, an Arizona municipal corporation

By:_____
Ed Honea, Mayor

Date:_____

DEVELOPER:

MERITAGE HOMES OF ARIZONA, INC., an Arizona corporation

By:_____
Ryan Hamilton, Vice President

Date: _____

ATTEST:

_____
Cherry L. Lawson, Town Clerk

APPROVED AS TO FORM:

_____
Jane Fairall, Town Attorney

STATE OF ARIZONA)
ss
County of Pima)

The foregoing instrument was acknowledged before me on _____, 2022 by Ryan Hamilton, the Vice President of MERITAGE HOMES OF ARIZONA, INC., an Arizona corporation, on behalf of the corporation.

(Seal)

_____
Notary Public